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The Marine Corps Lessons Learned System:

An Assessment

by

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The Marine Corps Lessons Learned System (MCLLS) provides Marines with the capability to document, process, and disseminate lessons learned and related information from after action reports. MCLLS is an IBM-compatible database management system that is available to all Marine organizations. MCLLS provides a starting point for correcting identified deficiencies in doctrine, organization, training, education, and equipment. The primary goal of this study is to assess the effectiveness of MCLLS. The research methodology includes personal interviews with commanding officers and MCLLS managers from Fleet Marine Force units, and archival research from the MCLLS databases. The thesis explores the lessons learned submission and retrieval processes and investigates what changes in organizational functioning can be attributed to MCLLS. The research shows that MCLLS has improved organizational learning but has room for improvement. The thesis contains recommendations to improve program use by addressing the needs of the potential users of the system.

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ABSTRACT

The Marine Corps Lessons Learned System (MCLLS) provides Marines with the capability to document, process, and disseminate lessons learned and related information from after action reports. MCLLS is an IBM-compatible database management system that is available to all Marine organizations. MCLLS provides a starting point for correcting identified deficiencies in doctrine, organization, training, education, and equipment. The primary goal of this study is to assess the effectiveness of MCLLS. The research methodology includes personal interviews with commanding officers and MCLLS managers from Fleet Marine Force units, and archival research from the MCLLS databases. The thesis explores the lessons learned submission and retrieval processes and investigates what changes in organizational functioning can be attributed to MCLLS. The research shows that MCLLS has improved organizational learning but has room for improvement. The thesis contains recommendations to improve program use by addressing the needs of the potential users of the system.

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I. INTRODUCTION

A. RATIONALE FOR RESEARCH

The Marine Corps Lessons Learned System (MCLLS) is an interesting research topic. MCLLS is an IBM-compatible database management system that allows Marines from all organizational levels to document, process, store, and disseminate their lessons learned through experience. It also provides MCCDC analysts the opportunity to receive information from the Fleet Marine Force and to take remedial action to correct identified deficiencies in doctrine, organization, training, education, and equipment. In this thesis, I evaluate MCLLS as an effective tool to promote organizational learning in Fleet Marine Force units.

Since its introduction in 1989, the Marine Corps has accumulated over 8500 lessons learned in the published MCLLS databases. The lessons learned databases cover a wide range of subjects. The majority of the lessons learned address military operations or logistics. Lessons learned during Desert Shield/Desert Storm comprise over fifty percent of the MCLLS databases. The system's primary source of lessons learned are after action reports from the Fleet Marine Force. In addition to unit after action reports, individual Marines may also submit lessons learned via their chain of command.

The implementation of MCLLS recognized the fact that Marines throughout the Marine Corps learn many of the same lessons, repeatedly. Lessons learned in one organization have rarely been shared with other

organizations. Even within an organization, frequent personnel turbulence made it difficult to share lessons learned through experience. Prior to MCLLS, Marines relied on after action reports to document lessons learned in operations and exercises and turnover folders and desktop procedure files to document internal organizational routines and lessons learned. These potentially useful sources of information were rarely shared across organizational boundaries. More often the lessons learned through experience were documented in paper records and banished to file cabinets until lost to the passage of time. Few organizational members had access to such records.

To gather information for this thesis I conducted personal interviews with commanding officers and Marines who manage MCLLS in battalion and larger units. I collected data on background issues, the MCLLS submission process, the MCLLS retrieval process, and the overall system's effectiveness from a Fleet Marine Force perspective. Fiscal constraints limited the number of interviews I could conduct and limited the data collection to a single base, Camp Pendleton. I interviewed Marines from command elements, ground forces, aviation units, and service support units. I also conducted MCLLS database searches to collect data on the database contents.

The goal of this thesis is to assess MCLLS as an effective tool to promote organizational learning. MCLLS is a tool every Marine can use. Organizational learning is the process. The underlying assumption is that organizational learning would lead to increased organizational efficiency. Organizational efficiency could be improved if the individuals within the

organization were to spend less time tackling problems already resolved by other organizational units and more time addressing unique challenges.

B. RESEARCH QUESTIONS

The primary research question of this thesis is:

- *Is the Marine Corps Lessons Learned System an effective tool to promote organizational learning?*

The research question contains two central themes. First, is MCLLS an effective tool to promote organizational learning? Second, does the effective tool result in organizational learning? Prior to this study, no methods existed to evaluate the MCLLS' effectiveness. I established the following criteria to measure MCLLS' effectiveness as a tool:

- *Do Marines use MCLLS?*
- *Is MCLLS a part of the organizational routine?*
- *Do Marines throughout the organization have access to MCLLS?*
- *Is MCLLS easy to use?*
- *Are Marines trained to use MCLLS?*
- *Is MCLLS cost effective?*
- *Are Marines satisfied with MCLLS?*

In this thesis I combine several definitions of organizational learning into a continuum of learning. I use the learning continuum model to evaluate organizational learning prompted by MCLLS. I answer the following questions to assess MCLLS' effect on organizational learning:

- *Does MCLLS encourage an open exchange of information?*
- *Does information retrieved from MCLLS lead to changes in organizational practices?*

C. ORGANIZATION OF THE THESIS

1. Chapter I: Introduction

The first chapter introduces the subject matter, research questions and presents an overview of the thesis organization.

2. Chapter II: Background

Chapter II contain two sections. The first section addresses individual and organizational learning. I also present several organizational learning models which I combine into a continuum of organizational learning. The second half of this chapter describes the evolution of the Marine Corps Lessons Learned System and the system's design and operation.

3. Chapter III: Methodology

In this chapter, I describe the research methods chosen to conduct this research and explain the reasons for selecting the methods. Appendices A and B contain the interview questions. I discuss the execution of the data collection efforts and some problems faced while gathering data. The last section describes the research constraints.

4. Chapter IV: Findings

Chapter IV describes the data collected from interviews and archival research. It is divided into the four types of questions asked; Background, Submission Process, Retrieval Process, and MCLLS Effectiveness. This section explains the coding schemes that I used to reduce the large quantity of transcribed material into a more manageable format.

5. **Chapter V: Analysis**

I evaluate the research results and answer the research questions. I interpret and assess the research results. I include my own observations and opinions based upon the research findings.

6. **Chapter VI: Conclusion**

I summarize the thesis, recommend actions to improve MCLLS effectiveness and make recommendations for future research.

II. BACKGROUND

A. INTRODUCTION

This chapter provides a frame of reference to better understand the research conducted. I divided the chapter into two segments. The first section, Organizational Learning, includes general concepts and definitions of organizational learning as well as a continuum of learning model based upon multiple definitions of organizational learning. The second section, The Marine Corps Lessons Learned System, describes the evolution of MCLLS and its current operation.

B. ORGANIZATIONAL LEARNING

1. Individual Learning

Learning, at its most basic level, implies change. Webster defines learning as the modification of a behavioral tendency by experience, as opposed to conditioning (Merriam-Webster, 1988, p. 681). From a behavioral sciences perspective, Mikulus describes learning as a relatively permanent change in behavioral potential which occurs as the result of practice. He adds that experience may be substituted for practice, but practice implies an active participant in the learning process. (Mikulus, 1974, p. 2)

Mikulus differentiates between learning and performance. Learning effects what one is capable of doing, or potential; performance is what one actually does, an action. The distinction between a potential and an occurrence makes it difficult to study learning (Mikulus, 1974, p. 2).

2. Organizational Learning

A starting point to the discussion of organizational learning is distinguish between learning by individuals and by organizations. Each organization is comprised of individuals capable of learning. An organization cannot learn without individuals learning. Argyris considers individuals to be the agents of organizational learning. He writes, "Organizations come alive through the thoughts and actions of individuals as organizational agents, creating the organizational behavioral world in which work gets done." (Argyris, 1993, p. 52) Hedberg writes, "Experiences from acting are stored in individuals minds, and these experiences modify organizations' future behaviors." (Hedberg, 1981, p. 3) People make organizational learning possible.

While learning through the experiences of individuals, an organization as a collective entity can develop systems, norms, traditions, and memories that support organizational goals and objectives and promote organizational learning. Hedberg writes:

> *Organizations do not have brains, but they do have cognitive systems and memories. As individuals develop their personalities, personal habits and beliefs over time, organizations develop world views and ideologies. Members come and go, and leadership changes, but organizational memories preserve certain behaviors, mental maps, norms and values over time. (Hedberg, 1981, p. 6)*

In this thesis, I rely on definitions of organizational learning from Huber and Argyris and Schon. Huber offers a broad view of organizational learning. He defines *organizational learning as occurring whenever an organization acquires knowledge that it recognizes as potentially useful to the organization* (Huber, 1991, p. 89). Argyris and Schon offer a more stringent

interpretation of organizational learning. They state that *organizational learning requires the identification and correction of errors* (Argyris and Schon, 1978, p. 2).

Both perspectives have merit. Huber's definition implicitly rejects the requirement that learning increase effectiveness while focusing on the potential for improvement. Argyris and Schon associate organization learning with actions to improve organizational effectiveness, which I simply defined as positive change. Huber argues that not all learning leads to positive changes. He writes, "learning does not always increase the learner's effectiveness, or even potential effectiveness....Learning need not result in observable changes in behavior." (Huber, 1991, p. 89)

3. Huber's Organizational Learning Model

Huber's description of organizational learning offers a useful frame of reference to evaluate the Marine Corps Lessons Learned System (MCLLS). He divides the organizational learning process into four phases; knowledge acquisition, information distribution, information interpretation, and organizational memory. He defines the four phases of organizational learning:

> *Knowledge acquisition is the process by which knowledge is obtained. Information distribution is the process by which information from different sources is shared and thereby leads to new information or understanding. Information interpretation is the process by which distributed information is given one or more commonly understood interpretations. Organizational memory is the means by which knowledge is stored for future use (Huber, 1991, p. 90).*

a. Acquiring Knowledge

Although Huber discusses several methods of acquiring knowledge, one method, experimental learning, best describes the Marine Corps' attempts to learn from experiences. Organizational experiments and experiences provide opportunities to learn. In this thesis I view military operations and training exercises as experiments in organizational effectiveness. Feedback is essential element to promote learning. After action reports are a principal method to provide feedback to the participants and the military organization involved. Learning from experience is a primary goal of the Marine Corps Lessons Learned System.

b. Sharing Information

Given that individuals or the organizational units learn from their experiences, sharing that knowledge enables organizational learning to occur. Information dissemination encourages learning by allowing greater access to information to potential users in the organization. Shared interpretation provides an opportunity for more complete understanding of the organization and its range of potential behaviors. The shared interpretation of new information is affected by each individual's frame of reference and existing beliefs, the communication medium used, and the individual's and the organization's ability to process information (Huber, 1991, p. 102).

c. Organizational Memory

Huber believes that the basic processes that contribute to the occurrence, breadth, and depth of organizational learning depend on organizational memory. Organizational memory implies that experiences are recorded and stored in some manner to allow retrieval by members of the

organization. Organizational memories exist among the various parts of an organization. Organizational memories may also be stored in files, standard operating procedures, organizational routines, culture, and structures. Levitt and March write:

> *Inferences drawn from experience are recorded in documents, accounts, files, standard operating procedures and rule books; in the social and physical geography of organizational structures and relationships; in standards of good professional practice; in the culture of organizational stories, and in the shared perceptions of "the way things are done around here." (Levitt and March, 1988, p. 326)*

Memories in the minds of individuals are a key repository. Frequent personnel turnover mitigates the value of this memory source at the local level. Conversely, stability and minimal turnover can be a powerful repository of the organizational memories, norms and practices. (Huber, 1991, p. 106)

Huber identifies four variables that influence the effectiveness of an organization's memory: (1) personnel attrition, (2) information distribution and shared interpretation, (3) the norms and methods of storing information, and (4) the methods for locating and retrieving stored information. Two specific points are relevant to this thesis. People in an organization will not store information in the organizational memory if they do not anticipate a future requirement for that information. Also, information stored yet not readily accessible to organizational members hinders organizational learning. Individual members of the organization with a valid need for the information may not be aware or have access to the information stored in the organization's memory. (Huber, 1991, p. 105)

Levitt and March address the cost of recording experiences. Information will not be retained in the organizational memory if the cost of recording, storing, or accessing the information is greater than the perceived value gained. The organization defines the cost of recording information in terms of time or money. Recent advances in information technology allows increased collection and storage of large quantities of information while lowering the cost of recording and managing it. (Levitt and March, 1988, p. 327)

Advances in information technology and increased availability of computer resources continue to create new opportunities to store and retrieve large quantities of organizational memories. Huber credits improvements in the user friendliness of information retrieval systems with reducing obstacles to storing information on computers. Any computerized information can easily be a candidate for permanent storage as an organizational artifact. (Huber, 1991, p. 106)

The costs associated with recording information into organizational memory imply the following assumptions in this thesis. First, information that is perceived to have little value to the organization may not be included in the organizational memory. Second, a screening process must exist to determine what has value and should be coded into the organizational memory.

4. Argyris and Schon's Organizational Learning Model

a. Single-loop and Double-loop learning

Argyris and Schon's model relates to observable actions or outcomes. They describe two types of organization learning, single–loop and

double–loop. Single–loop learning occurs when errors are identified and corrected without modifying organizational policies, norms, or procedures. Double–loop learning entails a more pervasive modification of an organizations basic norms, policies, or objectives. (Argyris and Schon, 1978, p. 3)

Single–loop learning corrects detected errors within the existing organizational framework. Argyris and Schon write, "It is primarily concerned with effectiveness— that is, with how best to achieve existing goals and objectives and how best to keep organizational performance within the range specified by existing norms." (Argyris and Schon, 1978, p. 21) Double–loop learning involves more than detecting and correcting errors. It entails challenging the norms by which the errors and corrective action are measured. Argyris and Schon categorize double-loop learning as, "those sorts of organizational inquiry which resolve incompatible organizational norms by setting new priorities and weightings of norms, or by restructuring the norms themselves together with associated strategies and assumptions." (Argyris and Schon, 1978, p. 24)

b. Defensive Routines

Argyris and Schon consider most organizations to be open to single-loop learning which increases effectiveness within established parameters. On the other hand, organizations tend to resist double-loop learning which questions the organizational norms and practices. Argyris and Schon believe organizations have defensive routines that resist double-loop learning. They write, "An organizational defensive routine is any policy or action that inhibits individuals, groups, inter-groups, and organizations from

experiencing embarrassment or threat and at the same time, prevents the actors from identifying and reducing the embarrassment or the threat." (Argyris, 1993, p. 15) Such defensive routines protect the status quo at the expense of organizational learning and lead to less effective performance.

Defensive routines within an organization lead individuals to avoid conflict. Potentially embarrassing or threatening issues are avoided or overlooked. The "proven" ways of doing business dominate the organization. The organization develops policies and procedures that delay or block organizational change. Difficult issues are avoided. Minor problems tend to become major problems before action is taken to correct the deficiency. Organizational reward systems play a large role in crafting and maintaining defensive routines (Argyris, 1993, p. 53). Hedberg writes, "Systems can be designed to favor organizational curiosity and to discourage complacency: lower the costs of failure and support risk taking can substantially increase searching (for optimal solutions) and experimentation." (Hedberg, p. 21)

5. A Learning Continuum

Huber's and Argyris and Schon's definitions of organizational learning describe multiple levels of learning. Huber's definition focuses on the acquisition of knowledge that the organization recognizes as potentially useful. Huber's emphasis on the acquisition, and storage of information provides a solid foundation to evaluate organizational learning. At a higher level, Argyris and Schon's single loop-learning describes the identification and correction of errors. Unlike Huber's model, single-loop learning demands action to correct a deficiency. The third and highest level in my continuum,

double-loop learning describes the identification and correction of errors by changing the underlying norms, policies and procedures. Double-loop learning not only corrects the error, it also seeks to rectify the underlying causes of the error. Figure 2-1 displays the learning continuum.

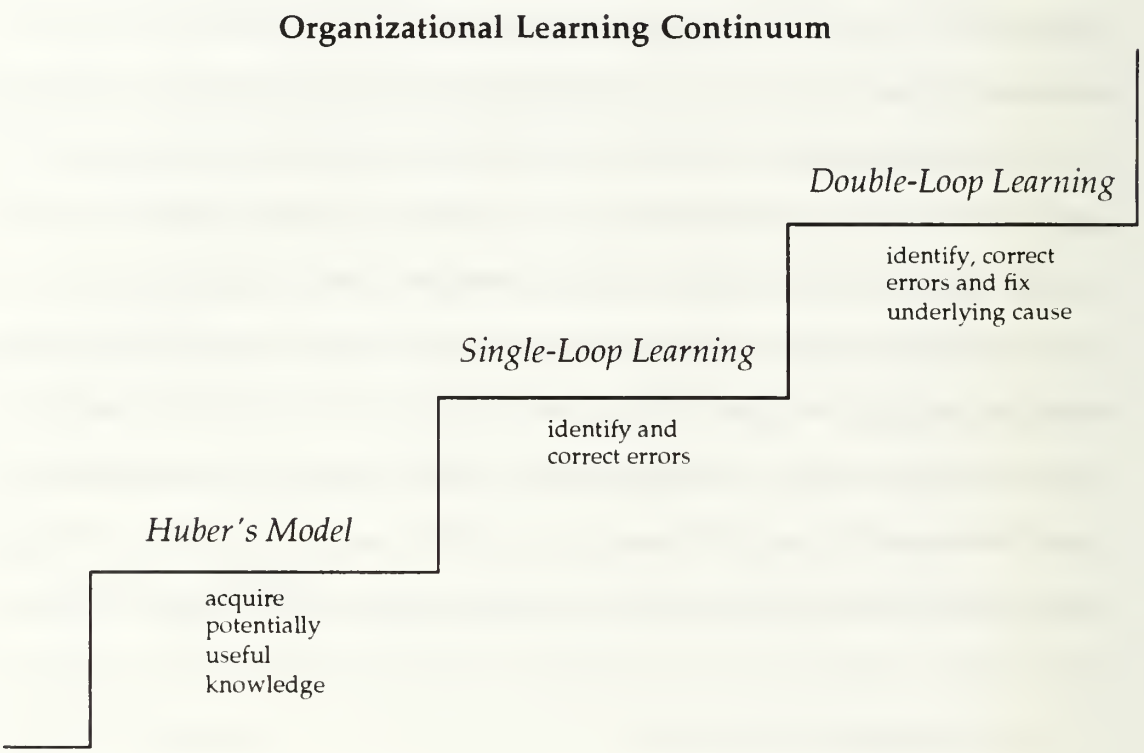


Figure 2-1, Organizational Learning Continuum

C. MARINE CORPS LESSONS LEARNED SYSTEM

1. Origins

a. General Accounting Office Reports

In 1979, the General Accounting Office (GAO) issued a report that criticized Defense Department practices in joint exercises. The report titled,

"Improving the Effectiveness of Joint Military Exercises -- An Important Tool For Military Readiness," cited the lack of systematic procedures to ensure that lessons learned in training exercises were incorporated into future training or operational commitments. The GAO visited commands and found multiple methods and systems for recording lessons learned. Although many lessons learned were recorded, the report identified deficiencies in the following areas:

- *Difficulties implementing and following up on lessons learned and applying them to future operations.*
- *Lack of a systematic analysis of after action reports.*
- *Lack of an adequate formal system for analyzing exercise results to preclude recurrence of identified problems.*
- *Recurring problems from one exercise to the next. (GAO Report, 11 December 1979)*

The GAO report concluded with a recommendation that the Secretary of Defense take several actions to correct identified deficiencies including the establishment of adequate systems for dealing with the exercise lessons learned. The Department of Defense concurred with the recommendations.

In March 1985, the General Accounting Office issued a follow up report titled, "Report to the Secretary of Defense: Management of the Joint Chiefs of Staff Exercise Program Has Been Strengthened, But More Needs To Be Done." Once again the GAO noted several deficiencies in the Department of Defense's methods for taking action on lessons learned. Problems were being identified but corrective actions were noticeably absent. As an example, the GAO noted that three major problems identified in the Grenada invasion

after action reports had been reported as major deficiencies twenty years earlier following the United States intervention in the Dominican Republic. (Landry, 1989, p. 162)

One significant outcome of 1985 report was the creation of the Joint Uniform Lessons Learned System (JULLS). The 1985 GAO report applauded the U.S. Readiness Command's (USREDCOM) computer database system as being the best effort to implement the recommendations of the 1979 GAO report. The Department of Defense adopted USREDCOM's system and it became the foundation of today's JULLS. The Marine Corps Lesson Learned System is a descendent of JULLS.

b. Marine Corps Combat Development Command

On 10 November 1987, General Al Gray, Commandant of the Marine Corps, activated the Marine Corps Combat Development Command (MCCDC). Formed from existing assets aboard the Marine Corps Education and Development Center in Quantico, Virginia, MCCDC became the focal point of all studies, mission area analyses, doctrinal development, requirements generation, and war fighting conceptualization. MCCDC collates Fleet Marine Force requirements and prioritizes available resources. (Hilliker and Jesson, 1989, p. 60)

Marines at the Marine Corps Combat Development Command develop and assess war fighting concepts, determine resource requirements and manage much of the training and formal military education throughout the Marine Corps. Five centers comprise MCCDC: the Marine Air Ground Task Force (MAGTF) Warfighting Center, the Training and Education Center, the Intelligence Center, the Wargaming and Assessment Center, and the

Information Technology Center. Marines in the Warfighting Integration Division, MAGTF Warfighting Center, MCCDC, manage the Marine Corps Lessons Learned System. (Hilliker and Jesson, 1989, p. 71)

The MAGTF Warfighting Center develops operating concepts and doctrinal development. Marines in the Warfighting Center create the mid and long range plans for the Marine Corps. During the formulation process of the long range plans, service strategy concepts are analyzed for strengths and weaknesses. Input from Marines serving in the Fleet Marine Force is actively sought. MCLLS is an important source of information from the operational forces. In 1987, General Gray wrote:

> *We are all aware of the pressing need for the rapid transfer of information. To fail in this area is an admission of inefficiency at best and a loss of control at worst. We must institute measures... to ensure any shortcoming in this area is avoided. (Hilliker and Jesson, 1989, p. 76)*

General Gray frequently emphasized the importance of encouraging all Marines to turn on their brain power and express their ideas from the bottom up. He wrote, "The one message that I want relayed to all Marines --active, reserve, retired and all friends of Marines-- is to turn on the brain power and help make your Corps what you want it to be." (Hilliker and Jesson, 1989, p. 79)

2. Implementation

The Marine Corps Lessons Learned System (MCLLS) introduction coincided with General Gray's initiatives to increase the flow of information from the lowest levels of the Fleet Marine Force to the highest organizational levels. On 5 March 1990, The Marine Corps issued Marine Corps Order (MCO)

5000.17, Marine Corps Lessons Learned System. MCO 5000.17 established the Marine Corps' policies, procedures and guidelines for the operation of MCLLS. The stated objectives of MCLLS in MCO 5000.17 are:

- *to provide the Marine Corps with a capability to collect, process, and disseminate lessons learned and related information from after action reports.*

- *to provide a responsive method for initiating action to correct deficiencies or shortfalls noted through the analysis of after action report's in the areas of doctrine, organization, training and education, and equipment.*

a. Hardware and Software Development

Soon after MCLLS initiation in 1990, the MCLLS databases grew dramatically, primarily due to Desert Shield and Desert Shield submissions. Originally distributed on 360K (kilobyte) floppy disks, the size of the MCLLS' databases quickly became unmanageable. By 1992, the databases filled 60 floppy disks. Few operational units had the time to load these disks quarterly or had the hard disk space to do so. MCCDC tackled the database size problems by adopting a Compact Disc Read Only Memory (CD ROM) media for data dissemination. The hardware system pre-requisites are an IBM compatible computer, minimum 512 RAM, MSDOS 3.0 or higher, Microsoft CD ROM DOS extension (MSCDEX), with an EGA, VGA, Super VGA monitor. (CG, MCCDC ltr, 22 May 1992)

MCCDC procured and paid for over 300 CD ROM readers, at a cost of $599 per unit, for MCLLS users throughout the Marine Corps. The CD ROM reader fielding coincided with the Department of Defenses computer systems initiatives to move large data distribution to CD ROM media. Compact discs

have the added benefit of allowing even greater quantities of information to be stored on a single disk. Recall the MCLLS databases that required sixty 360K (kilobyte) disks, a single compact disc can contain 650 megabytes of information, thirty times more information than the sixty floppy disks. CD ROM technology currently offers the most capable and efficient means to store, transmit and access large databases. (CG, MCCDC ltr, 22 May 1992)

MCLLS users received the CD ROM readers during the summer of 1992. MCCDC released the first MCLLS compact disc in January 1993. In September 1993, MCCDC released the second edition MCLLS CD, Version 4.0. The second edition contained significantly revised operating software, ROMWARE ™. MCLLS, Version 4.0, also includes the Joint Lessons Learned databases, the Navy Lessons Learned databases, the Marine Corps Studies Catalog databases, and several Marine Corps Executive Summaries.

MCLLS allows the operator to quickly access large quantities of data stored in the lessons learned and other databases. The databases have been indexed using Hypertext techniques. Hypertext uses keywords to search textual data. This enables the reader to search for highlighted text in a number of different methods. MCLLS has five search options: Keyword, Administrative Data, Text String, Range, Sequence Number, and MCLLS number.

The MCLLS software is a stand alone database management system. There are two primary MCLLS databases, the Remedial Action Program (RAP) and the Information (INFO) databases. The information database file is titled "USMC" in the MCLLS Version 4.0 software. The current RAP database has over 1200 MCLLS entries. The INFO database is the repository for all lessons

learned that are not in the RAP database. The current INFO database has over 7200 entries.

3. After Action Reporting

MCLLS is more than just a software program. MCLLS includes all aspects of identifying lessons learned throughout the Marine Corps, analyzing potential corrective actions, and sharing the lessons and corrective actions with MCLLS users around the world. The backbone of MCLLS are lessons learned reports generated by Marines in the operational forces and the supporting establishment. Without a constant stream of lessons learned, MCLLS would be a hollow system.

A primary source of lessons learned are after action reports. MCLLS provides a standardized set of procedures for the submission of after action reports. The MCLLS after action report format is compatible with the Joint Uniform Lessons Learned System (JULLS). Nimbus Information Systems created both MCLLS and JULLS software using ROMWARE ™.

Marine Corps Order 5000.17 describes after action reports as providing the official record of operations, exercises, and other reportable occurrences which identify significant lessons learned. Lessons learned are defined as procedures, methods, and techniques to overcome deficiencies in doctrine, organization, training and education or equipment. Lessons learned that are included in MCLLS provide Marines with insights that may allow them to perform at higher levels of performance.

Marine Corps Order 5000.17 requires commanders to submit MCLLS reports after the following events:

- *All joint or combined operations and exercises*

- *Marine Expeditionary Force, Brigade, or Unit operations and exercises.*

- *Combined Arms Exercises (CAX) conducted at the Marine Corps Air Ground Combat Center, Twenty-nine Palms, CA.*

- *Unilateral Division, Wing, Force Service Support Group (FSSG), and Surveillance, Reconnaissance Group (SRIG) exercises.*

- *Mediterranean or Western Pacific deployments.*

- *Significant exercises designated by Marine Force (MARFOR), Marine Expeditionary Force (MEF), Division, Wing, FSSG or SRIG commanders.*

- *Day to day garrison activities which reflect a significant improvement or solution to a Marine Corps wide deficiency or shortcoming.*

- *Commandant of the Marine Corps (CMC) Inspector General (IG) inspections when deemed appropriate by the Inspector General for Marine Corps wide dissemination.*

- *Conferences in which the outcome of the conference is a listing of possible deficiencies or shortfalls that should be included in the Remedial Action Program.*

- *Marine Corps War Games sponsored by a general officer.*

- *Simulations, studies, and historical analysis conducted through the Marine Corps Combat Development Command that generate lessons learned that could enhance the operational effectiveness of operational units.*

- *Consolidated semiannual after action reports reflecting lessons learned and trends observed during training or evaluations conducted by the Marine Aviation Weapons Tactics Squadron-1 (MAWTS-1), the Marine Corps Mountain Warfare Training Center, and the*

Tactical Exercise Evaluation and Control Group (TEECG) at the MCAGCC, Twenty-nine Palms, CA.(MCO 5000.17, 1990)

The Marine Corps MCLLS order addresses the need to incorporate lessons learned during the day-to-day operation of an organization. Historically, routine lessons learned have been included in unit standard operating procedures, desktop folders, and turnover files. Limited access to local unit files containing organizational lessons learned deprives Marines throughout the Corps of the opportunity to benefit from those insights and experiences. MCLLS allows the submission of any lesson learned, at any time, and from any level of the organization.

4. Report Submission Process

Marine Corps lessons learned reports may originate at any level and are forwarded to MCCDC via the chain of command. The following chart displays a generic Marine Corps chain of command.

Generic Marine Corps Chain of Command

Unit	Senior Ranking Marine
Fire Team	Corporal
Squad	Sergeant
Platoon	Lieutenant
Company	Captain
Battalion	Lieutenant Colonel
Regiment	Colonel
Division	Brigadier General
Marine Expeditionary Force	Major General
Fleet Marine Force	Lieutenant General

For administrative purposes, the next step in the chain would be the Commandant of the Marine Corps (CMC). MCCDC is a staff agency under the direction of the Commandant of the Marine Corps. Operationally, Fleet Marine Forces are attached to unified commands.

Most after action reports begin at the battalion level. A MCLLS report from this level must go through four organizational levels before reaching MCCDC. Battalions and higher units have Operations and Training staffs that manage after action reporting and MCLLS submissions. At each level in the process, the MCLLS submission may be modified, rejected, or approved. Approved submissions move to the next level in the chain. A lesson learned submission originating from the lowest organizational level may pass through nine levels of the chain of command before reaching MCCDC.

5. MCLLS Reporting Format

The MCLLS report format contain nine paragraphs. The first four paragraphs contain background information. Paragraphs five through eight describe the lesson learned, allow the author to discuss his observations and recommendations for corrective action. Paragraph nine contains comments from the Remedial Action Program Working Group of the Office of Primary Responsibility. The following text is an actual MCLLS long report from the RAP database:

UNCLASSIFIED

MCLLS LONG REPORT

1. (U) MCLLS NUMBER: 11370-34637 (00041), submitted by MCLSB BARSTOW, CWO4 L. ROSS, 282-6339, (619)577-6339.

2 (U) CPX PROUD EAGLE 90 conducted by JCS on 11/13/89.

3. (U) KEYWORDS: AAC (ACTY ACCOUNT CODE), C2 (COMMAND AND CONTROL, COMMERCIAL CARRIER, CONTAINERS, CPX (COMMAND POST EXER), ENVIRONMENT UNIMPORTANT, EXERCISE ISSUE, HQMC (HQ MARINE CORPS), LOGISTICS, MA41, MA43, MTMC (MIL TRAFFIC MGT CMD), OTHER AGENCIES, PROUD EAGLE 90, PWR (PREPOS WAR RESERVES), RAP, RAAP1, REMEDIAL ACTION OPEN, SERVICE HEADQUARTERS, STAFF FUNCTIONS, STEERING COMMITTEE, TRANSPORTATION, USMC (US MARINE CORPS).

4. (U) TITLE: CONTAINERS

5. (U) OBSERVATION: Higher headquarters tasking on utilization of 20′ containers in shipping Marine Expeditionary Force (MEF) requirements met with poor results. Additional problems with the availability of commercial 20′ containers were encountered when used for domestic shipments that are destined for export.

6. (U) DISCUSSION: Conversations with the Military Traffic Management Command (MTMC), revealed that obtaining 20′ containers for shipments within CONUS is the responsibility of the shipper. Commercial carriers contacted could not provide these containers in the quantity requested or in the time required in the exercise scenario. However, 40′ containers are readily available for domestic and export shipments. Movement within CONUS will be consolidated, using commercial carrier's available equipment.

7. (U) LESSON LEARNED: There is a definite trend in private industry to the movement away from the use of 20′ containers for shipment based upon the more economic and more efficient use of 40′ and larger containers. Most shippers have modified their ocean vessels to carry the larger containers.

8. (U) RECOMMENDED ACTION: That a review be conducted on the requirement to use 20′ containers and the impact that 40′ container use would have at ports of debarkation (POD). That HQMC request MTMC provide planning figures on the number of 20′ containers that would be made available for export shipments on both east and west coast.

9. (U) COMMENTS: The Remedial Action Program (RAP) Steering Committee reviewed this item and categorized it as requiring remedial action. HQMC (LPO) provides the following comments:

a. (U) Current HQMC container policy was promulgated by CMC ltr 4680 LP of 19 Oct. 89. This letter is the precursor to a planned Marine Corps order. Drafting this order has been delayed because of higher priority SWA operations, and the desire to incorporate SWA lessons in this order.

b. (U) The Military Traffic Management Command (MTMC) conducts a Container Requirements and Availability Study (CRAS) on a recurring basis. The commercial trend is toward 40′ containers, but sufficient 20′ containers are available to meet DoD requirements. MCLB Barstow should have a supporting plan that identifies 20′ container sources in its regional area.

c. (U) This item will be discussed at the USMC Container Conference to be convened by HQMC (LPO). This conference was originally scheduled for Dec 90/Jan 91; but was postponed because of Desert Storm; it is now tentatively scheduled for Jul/Aug 91.

d. (U) Point of contact at LPO is Captain Burke, AUTOVON extension 226-1084.

--- (U) SUBJECT: LOGISTICS

--- (U) INTEROPERABILITY: NONE

--- (U) Lesson distributed by: MCCDC (WF)

UNCLASSIFIED

MCLLS includes a separate program to aid in writing MCLLS reports. The MCLLS Instructional Input Program (MIIPS) provides a pre-formatted method to create MCLLS reports. The program occupies relatively little disk space and can be installed on any personal computer.

MCLLS submissions to MCCDC come in two parts. The first is called a Summary Lesson Learned. A Summary Lesson Learned report addresses a specific exercise or operation. The Summary Lesson Learned report contains

general information and acts a folder for multiple Individual Lesson Learned reports. Each Individual Lesson Learned report contains a unique lesson learned. A typical after action report would contain one Summary Lesson Learned report with multiple Individual Lesson Learned reports. Individual Lesson Learned reports, particularly those not associated with an exercise, do not require a Summary Lesson Learned report.

6. Remedial Action Program

The Remedial Action Program (RAP) database includes lessons learned that have been identified as requiring specific action to correct deficiencies or shortfalls on existing doctrine, organization, training and education. MCLLS reports that do not require corrective action are included in the Information database. The Remedial Action Program Section, Warfighting Integration Division, MCCDC manages the routine operation of the Remedial Action Program. The small staff of this section are the only Marines that work full time with MCLLS. The remaining participants, at all levels of the Marine Corps, execute their MCLLS responsibilities as additional duty to their primary job.

Two committees run the Remedial Action Program. Both committees consist of representatives from Headquarters, U.S. Marine Corps (HQMC), MCCDC and the Marine Corps Systems Command (MARCORSYSCOM). The RAP Steering Committee accepts remedial action items into the remedial action program and assigns responsibility to designated agencies to evaluate the MCLLS report for possible corrective action. The Steering Committee,

known as a "Council of Colonels," maintains overall responsibility for the execution of the RAP process.

The RAP Working Group provides administrative support for the RAP Steering Committee. The Working Group, comprised of field grade officers, does the leg work and prepares information for the RAP Steering Group's analysis and decision. The RAP Steering Group meets quarterly. The RAP Working Group also meets quarterly, but their workload is spread throughout the year. Within ten days of receipt at MCCDC, a remedial action item will be distributed to a working group member for action.

The Remedial Action Program process is continuous. It begins when an item is recommended for inclusion in the remedial action program. An item may be recommended for inclusion at any command level. At MCCDC, the Warfighting Integration Division screens all MCLLS submissions for possible inclusion into the RAP process. Action officers research potential RAP items and report their findings to the Steering Committee. The Steering Committee decides whether to accept an item into the RAP process.

Once accepted, the Steering Committee monitors the progress of the MCLLS item throughout the remedial action process. The Steering Committee assigns an Office of Primary Responsibility (OPR) to each remedial action lesson learned. The Office of Primary Responsibility will be the staff department, typically a section of HQMC, MCCDC or MARCORSYSCOM, best able to answer the issues raised in the MCLLS report. The Office of Primary Responsibility develops the plans to correct the deficiency, tracks the progress, validates corrective actions, and recommends satisfactory solutions. For equipment related MCLLS items, the office of primary responsibility must

prepare the acquisition requirement documents. The Steering Committee closes the remedial action process for each MCLLS item when it is complete. Figure 2-2 depicts the remedial action review process.

REMEDIAL ACTION REVIEW PROCESS

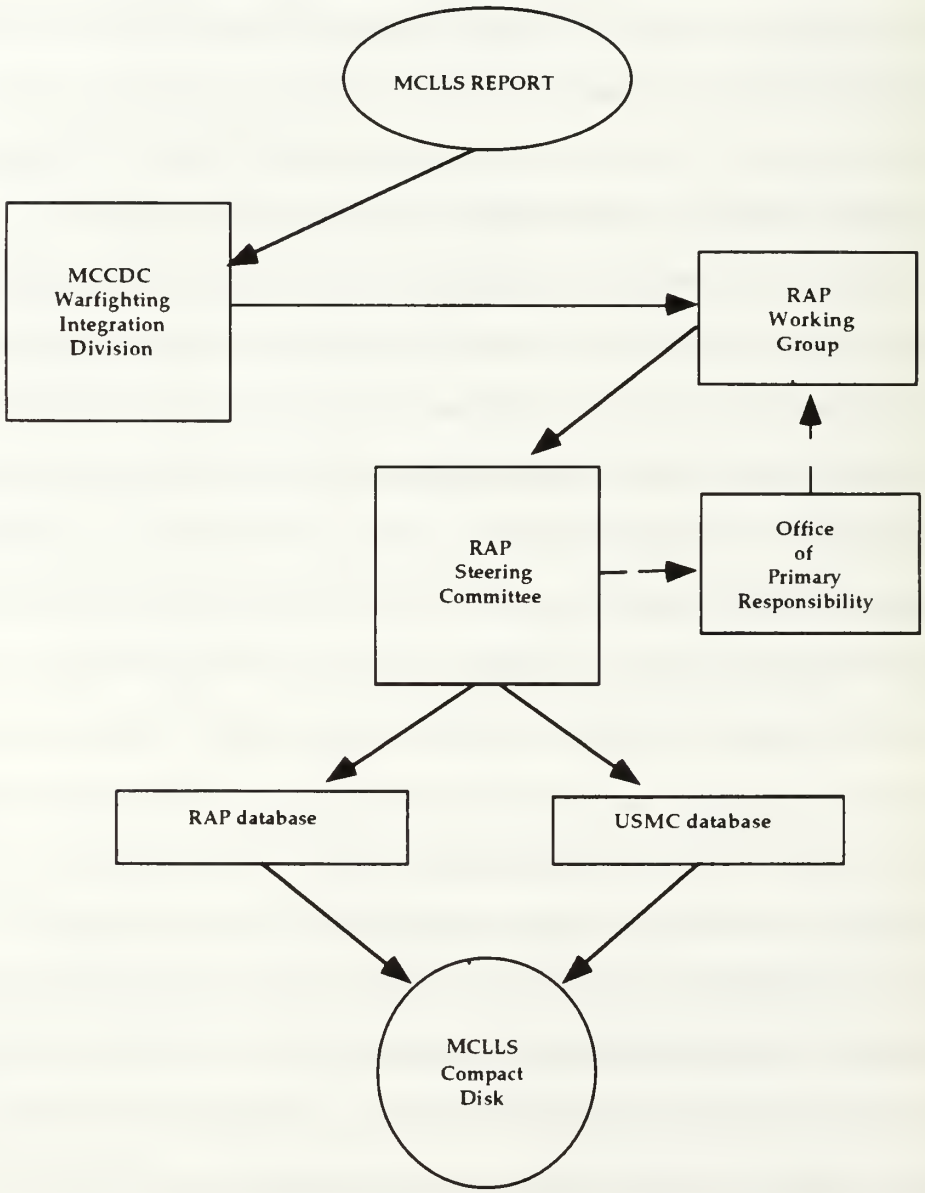


Figure 2-2, Remedial Action Review Process

The remedial action process is integrated with the Marine Corps Combat Development Process (CDP). The Combat Development Process is a systematic, formal approach to translate abstract concepts into executable programs. MCLLS is a source of input into the CDP. When the RAP Steering Committed validates a MCLLS item as requiring remedial action, MCCDC analysts develop requirement documents and balance the priority of the item with fiscal constraints. The Marine Corps will soon implement a automated data system, the Capability Review System (CRS), to enable planners to track flow of a program through each phase of the Combat Development Process. (Moore, 1994, p. 44)

III. METHODOLOGY

A. INTRODUCTION

I began my research by conducting informal interviews with Marine officers who had recently left Fleet Marine Force units. I integrated their experiences with my own thoughts and encounters with MCLLS. Through this process, I developed my primary and secondary research questions. This thesis provides answers to the primary research question:

- *Is the Marine Corps Lessons Learned System an effective tool to promote organizational learning?*

The primary research question addresses two principle concepts. First, is MCLLS as an effective tool to promote organizational learning? Second, does the use of the effective tool result in organizational learning? MCLLS as a tool is an intervention in the process. Organizational learning is the broader process. It is possible to have a highly effective tool, which results in little organizational learning. It is also possible to have ineffective tool, and still have in a high level of organizational learning. Learning can occur due to other factors besides MCLLS. The goal of this thesis is to evaluate both the effectiveness of the tool and the tool's impact on organizational learning.

No criteria currently exist to measure MCLLS as an effective tool. Thus, I developed the following set of criteria:

- *Do Marines use MCLLS?*
- *Is MCLLS a part of the organizational routine?*
- *Do Marines throughout the organization have access to MCLLS?*
- *Is MCLLS easy to use?*
- *Are Marines trained to use MCLLS?*
- *Is MCLLS cost effective?*
- *Are Marines satisfied with MCLLS?*

I evaluate tool's effectiveness on organizational learning by using the learning continuum model discussed in the previous chapter. The learning continuum model describes three levels of organizational learning. Huber's model is at the lower end of organizational learning. Argyris and Schon's single-loop model is a moderate level and their double-loop model is at the high end of the scale of organizational learning.

To measure organizational learning I investigated the following questions:

- *Does MCLLS encourage an open exchange of information?*

- *Does information retrieved from MCLLS lead to changes in organizational practices?*

This chapter describes my methods to answer the research questions. My first task was to gather information on MCLLS and to learn how to operate the MCLLS software. Next I developed interview questions and interviewed Marines familiar with MCLLS. Following the interview process, I conducted

multiple MCLLS database searches and coded the data for analysis. The last section of this chapter address the constraints of this research effort.

B. MCLLS LITERATURE SEARCH

I initiated this research effort by searching for literature and information on the Marine Corps Lessons Learned System. I conducted library computer searches from the Defense Technical Information Center (DTIC) and found no published material or government documents relating to MCLLS. I did find several unpublished papers addressing the Joint Uniform Lessons Learned System and U.S. Army efforts to implement their own lessons learned program.

I contacted the MCLLS office in the Warfighting Development Integration Division, Marine Corps Combat Development Command (MCCDC) to ask if they knew of research efforts conducted on MCLLS. Although the Marines I contacted knew of no previous studies or evaluations, every individual contacted in the Warfighting Integration Division was extremely helpful in offering their assistance throughout this research effort. They provided me with the latest version of the MCLLS compact disc, Version 4.0, a student instruction guide from their MCLLS class, a user's manual, and various documents dealing with the distribution of the MCLLS to the Fleet Marine Force units and the system's implementation and operation.

C. MCLLS SOFTWARE OPERATION

Armed with the MCLLS user's manual and the compact disc, I taught myself how to operate the system. I loaded the MCLLS software to a dedicated

drive on a computer network. The software installed easily and I quickly learned to browse and search the various databases. I had used previous versions of MCLLS and found the new menu system to be a significantly more user friendly than the previous versions.

I experienced my first problem with the MCLLS software when I attempted to print a report and could not do so. The network printer configuration and the MCLLS printer setup did not coincide. The MCLLS software does not allow the user to select a printer. After speaking with three different computer network administrators, I was able to print a report by first entering a Microsoft Windows operating environment and then opening the MCLLS software. This type of problem is not discussed in the user's manual. The network administrators that helped me solve this problem suggest that the MCLLS software was designed to operate on a tradition non-networked computer with a dedicated printer.

D. DATA COLLECTION

1. Personal Interviews

The Marine Corps Lessons Learned System must be used for after action reporting by all Marine commanders and may be used by any Marine who wants to submit a lesson learned or search the databases for lessons learned. According to Marine Corps regulations, Marine commanders should be familiar with the operation of the Marine Corps Lessons Learned System. From conversation's with Marines at the MCLLS office in Quantico, I knew that the number of lesson learned received by the MCLLS office for inclusion

into the MCLLS compact disc had decreased over the past year and was cause for concern.

My research efforts investigated why Marines were not using a system that they had been instructed to use and asked questions that challenged their current procedures, I considered personal interviews to be vital to this thesis. Personal interviews allowed me to gather in-depth information on sensitive issues in a thorough manner. I recorded each interview and transcribed the interview tapes.

Since the purpose of this thesis is to evaluate the effectiveness of MCLLS as a tool to promote organizational learning. To answer this question, I targeted two groups of individuals, MCLLS managers and Commanding Officers. I defined MCLLS managers as individuals responsible for the operation and supervision of MCLLS in an organization. Typically, the MCLLS manager would be the unit Operations Officer or his assistant. MCLLS managers operate the system at their organizational level, as an additional duty to their primary job. Commanding officers are the senior Marine in the organization. They set the policies, goals and objectives for the organization and are responsible for everything that occurs in the organization.

2. Interview Questions

I created two sets of interview questions for the MCLLS managers and for the commanding officer. Both sets contained a majority of open ended questions to allow the respondent to answer in a relatively unconstrained manner. I did include several questions with scaled responses, primarily to gather background material. I divided the questions into four categories:

background, submission process, retrieval process, and MCLLS effectiveness. The commanders answered a set of thirty-three questions. Appendix A is the list of questions asked of the commanding officers. I asked the MCLLS managers a set of twenty-six questions. Eighteen questions are repeated in both sets. Appendix B is the list of questions asked of the MCLLS managers.

Once I had assembled my list of questions, I pre-tested each set. I interviewed five Marine officers and used their responses and feedback to improve the flow and content of the question sets. The pre-test helped identified questions that the respondent did not understand and those responses that did not provide me with the information I sought.

3. Conducting Interviews

My first task in this phase of the research effort was to find knowledgeable Marines to interview. Fortunately, Camp Pendleton contains a cross section of the four types of Marine organizations, a command element (I MEF), a ground force (1st MARDIV), a service support group (1st FSSG), and an aviation group (MAG 39). Figure 3-1 depicts the command structure.

Major Commands Aboard Camp Pendleton

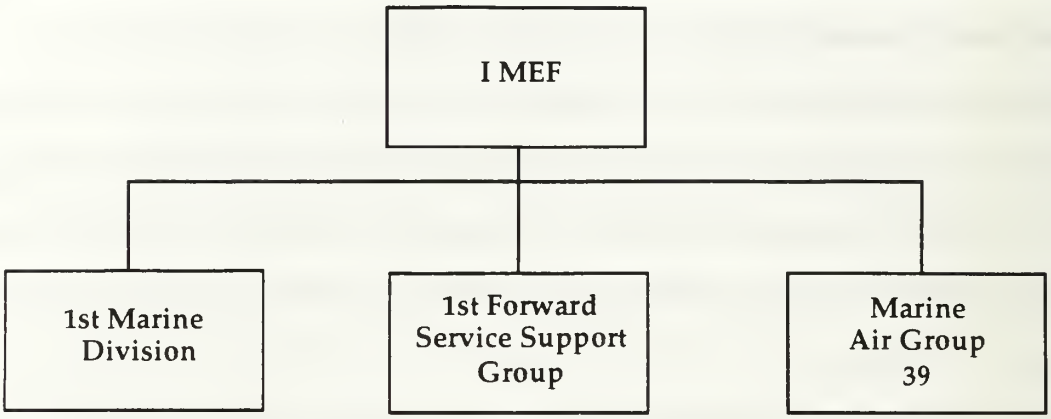


Figure 3-1, Major Commands Aboard Camp Pendleton

I telephoned various units aboard Camp Pendleton in search of knowledgeable individuals who could discuss MCLLS. I began by contacting the MEF, Division, FSSG, and Air Group headquarters to make appointments with the headquarters' MCLLS officer. I quickly made appointments with the MCLLS officers at the MEF and the Division. I could not find an individual assigned the MCLLS officer duties in the service support group nor in the air group.

I made repeated calls to the service support group headquarters before finding one Marine who had some experience with operating the MCLLS system. I had less success with the air group. I spoke with a Senior Non-Commissioned Officer in the operations office who stated that they used MCLLS during Desert Storm but had not used it since that operation. He suggested that I call the Wing headquarters at MCAS El Toro in Orange County, California. I called the Wing Operations office and asked to speak with the MCLLS officer for the Wing. I was told that the MCLLS officer was a sergeant who was on temporary additional duty (TAD) for the next three

weeks. I eventually literally ran into the Sergeant aboard Camp Pendleton. He stated that he had typed a few after action reports in the MCLLS format but that he did not really use the MCLLS system or manage any MCLLS reporting from subordinate units.

I continued my search for interview subjects by systematically telephoning Operations Officers from numbers listed in a base telephone directory while trying to maintain a balance among command, ground, support, and aviation units. I had a difficult time finding Marines who were familiar with MCLLS. Often, I was told that the one Marine who was the unit's only duty expert on MCLLS was unavailable. I continued calling operations officers until I filled my allotted schedule with interviews.

In the process of setting up interviews with MCLLS managers and through the background interviews, I targeted six commanding officers to interview based on their above average experience with MCLLS. I blindly selected two commanding officers from wing units to maintain a relatively balanced sample from the four major types of Marine organizations. During my four days aboard Camp Pendleton I conducted eight interviews with commanding officers, ten interviews with MCLLS managers, and five background interviews. Of the eighteen primary interview subjects, three came from command element units, six came from ground combat units, six came from service support group units, and three from aviation units. Three of the commanding officers had recently left command billets and were currently serving in staff positions.

In addition to recording interviews, I obtained an insiders viewpoint of how Marines really used MCLLS. I have included several observations in

the following chapter. While aboard Camp Pendleton, I also had the opportunity to attend a portion of a one day MCLLS class taught by instructors from the MCLLS office in Quantico. The class began with the basics of how to operate a computer and moved on to operating the MCLLS software. I had already mastered the basics of operating MCLLS and left the class after two hours to conduct previously scheduled interviews.

After I transcribed the taped interviews, I coded the responses to transform the many pages of interview notes into a more manageable form. Chapter IV of this thesis describes the coding scheme I used for each question.

E. MCLLS DATABASE SEARCHES

After conducting four days of interviews, I sought to discover what type of lessons learned actually made it into the MCLLS databases. I began by looking for lessons learned from commands that I had recently visited. I used the MCLLS software search options to dig for information. I tried keyword searches using keywords identified in the glossary of the MCLLS user's manual. I searched the Remedial Action Program database for lessons learned from the various commands in Southern California with little success. Using the keyword search for the four major Marine Commands in California, I found a total of fifteen lessons learned out of the 1284 in the database. I intuitively knew this result was inaccurate. I realized that the system, though capable of doing so, is not designed to search for lessons learned by specific commands. By browsing the databases I discovered that few of the lessons learned include the name of the submitting unit in the keywords portion of the report.

I next experimented, with greater success, by using the administrative search option on the MCLLS software. I first tested a personal observation. From browsing the databases I noticed a large number of lessons learned from Desert Shield and Desert Storm. I used the administrative search option by exercise sponsor category for the U.S. Central Command, USCENTCOM, the operational command for the desert operations. In the Remedial Action Program database, I found 806 of the 1284 records (63%) came from USCENTCOM. In the USMC database, I found 3690 of the 7276 records (51%) came from USCENTCOM organizations.

I continued my administrative data search by exploring the subject code assigned to each lesson learned. I ran a search on the RAP and the USMC databases for each subject code. In the RAP database 1269 of the 1284 lessons learned had subject codes. In the USMC database 7165 of the 7276 lessons learned had subject codes.

I assembled data on the type and content of the lessons learned in the RAP database. I used a random number generator to select a random sample of 100 lessons learned from the population of 1284. I then attempted to use the MCLLS software database management tools to create a separate database with my random sample of 100 lessons learned. Although the procedure to create a smaller database from a larger database is straightforward and clearly explained in the user's manual, I was unable to complete the process.

The procedure to copy selected records of a larger database to a newly created database is called cloning. It is a built in function of the MCLLS software. When I first attempted the procedure, I received an error message, "Unrecoverable file error, unable to create VM swap file." Immediately after

the message flashed on the screen, the computer quit MCLLS and returned to the main directory. I checked the cloned database and found only one of the one hundred records had been copied. I addressed this problem to the local area network administrators who were unable to help me. I decided to attempt the same procedure on a stand alone personal computer, not linked to a local area network. This time the software copied eight database records before quitting the MCLLS program. I contacted the MCLLS office in Quantico and was informed that the only person who could help me was away on business for a week.

Since I still wanted to view my randomly selected database of 100 lesson learned, I tried a different approach. This time I used the MCLLS software report generating function. I selected the 100 records and tried to create and print a report. The program generated the report which contained the entire record for each lesson learned but it quit printing after sixteen lessons learned. I guessed that the files were too big for the printer buffer so I created and printed seven reports each with fifteen lessons learned.

Just to test the system's capabilities, I randomly selected 100 records from the USMC database. I then created a report but did not try and print it via the MCLLS program. I opened the file, with the help of a DOS-Macintosh translator program, with a word processing program, Microsoft Word 5.1 for Macintosh. I printed the report via the word processing program with no difficulty.

Once I had paper copies of the records in my random sample, I began examining the lessons learned. I coded the data in five categories. I recorded the type of lessons learned as defined by the RAP working group, the rank of

the author of the lesson learned, the content of the RAP response, and the tone of the RAP response. Most MCLLS reports identify the type of lesson learned and the author's rank.

F. CONSTRAINTS

Fiscal restraints led me to collect data from units aboard one Marine base, Camp Pendleton, California. The small sample size of this thesis reflects the short period of time available to conduct the interviews. To best use the time allotted, I intentionally searched for individuals who could answer my interview questions. Thus the data collected from the personal interviews reflects the opinions of those who are in my opinion more familiar with MCLLS and than the Marine Corps population at large.

MCLLS is one of many inter-related sources of raw data to the Marine Corps Combat Development Process. Although a systems approach to evaluating this topic could include all aspects of Marine education and training, I will limit the discussion to that relating to MCLLS. The focus of this research effort is on the largest potential audience of MCLLS, Fleet Marine Force units. Although a large part of the MCLLS process involves what happens to the lessons learned once they reach the headquarters level in Quantico, lack of time and resources prevent me from deeply investigating that process.

IV. FINDINGS

A. INTRODUCTION

This chapter describes the interview and archival data collected during the thesis research. I present the interview responses and have developed a coding scheme to reduce the data to a more manageable form. As discussed in the previous chapter, I used two different sets of interview questions for Commanding Officers and MCLLS Managers. Many of the same questions were asked to both groups. I included the source of the data in each chart describing the data coding. Both sets of questions addressed four subjects: background information, the submissions process, the retrieval process, and learning and effectiveness of MCLLS. This chapter contains a separate section for each subject. The last section in the chapter adressess the archival data.

B. INTERVIEW BACKGROUND QUESTIONS

1. Does your unit have a CD-ROM machine attached to a computer?

I asked the ten MCLLS managers this question. All responded affirmatively. Nine of the ten units have a CD-ROM reader in their operations and training office, the S3 office. The one exception possessed multiple CD-ROM readers but did not have one in the S3 office. The training officer, without a CD-ROM reader in his office, stated that he had submitted a request to procure one when funds became available. I coded this data by location:

Source	*Code*	*Description*	*Count*
Managers	S	S3 office	9
	O	Other Location	1

Although most training officers had a CD-ROM in their office, not all were sure how they use it. One officer answered the question, "S3 office, but I can't tell you if we use it for MCLLS." Another training officer was not sure. He offered to show me what he had. It was a CD-ROM reader. Although it sat next to the computer, the CD-ROM lacked the necessary cables to link it to the computer. No one in the office knew how long the cables had been missing. Since the machine was in the office, I coded this example as "S," in the S3 office.

2. Does your unit have the MCLLS software?

All ten managers knew they had the MCLLS software. In the earlier interviews I asked the interviewee if he knew what version he had. Few knew the version off hand so I began visually inspecting their documentation to ensure that they had Version 4.0. They all did, even the S3 officer without a CD-ROM reader. I coded this data by the version on hand:

Source	*Code*	*Description*	*Count*
Managers	4	Version 4.0	10
	1	Version 1.1	0

3. **On a scale of one to five, where one is low, three is moderate, and five is high, rate your personnel level of computer literacy?**

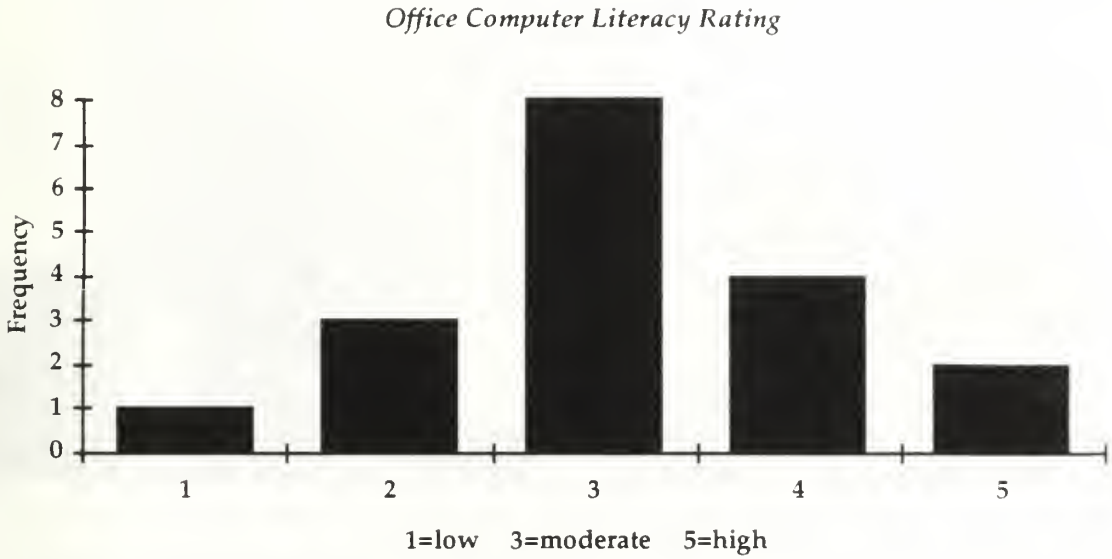
I asked this question of eight commanders and ten managers. Only two individuals rated their personnel computer literacy as low or high. Most rated their computer literacy in the moderate range. The mean, median and mode were 3.0. The following histogram depicts the results.

Personal Computer Literacy Rating

4. **On a scale of one to five, where one is low, three is moderate, and five is high, rate the level of computer literacy of the Marines working in your command?**

I asked this question to eight commanders and to ten managers.

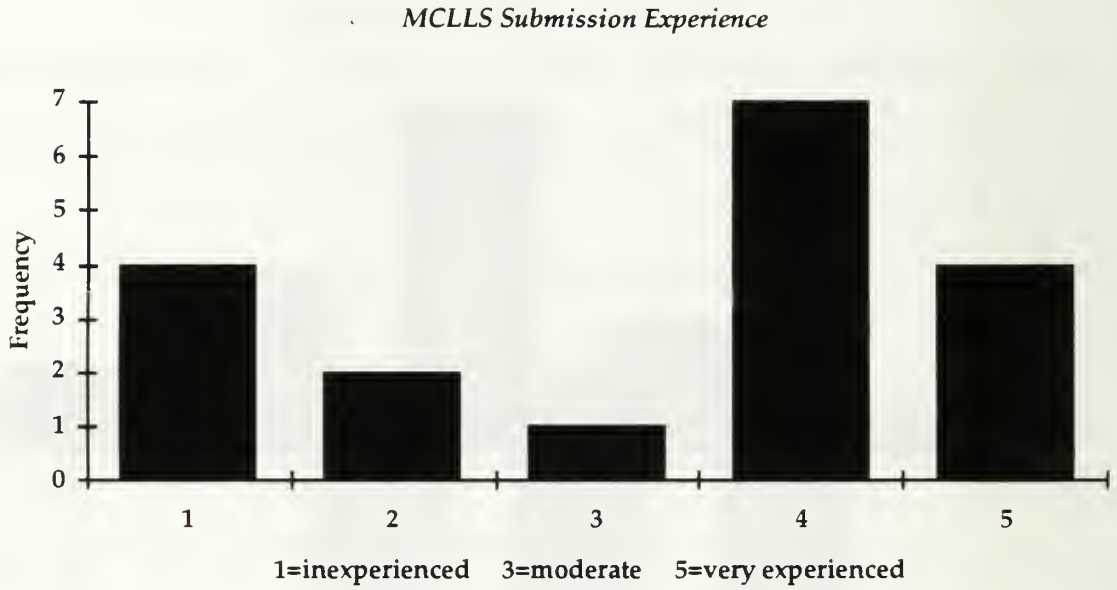
The mean response was 3.16. The median and mode were 3.0. The following histogram shows the results.



5. On a scale of one to five, where one is inexperienced, three is moderately experienced, and five is very experienced, rate your level of experience with submitting MCLLS reports?

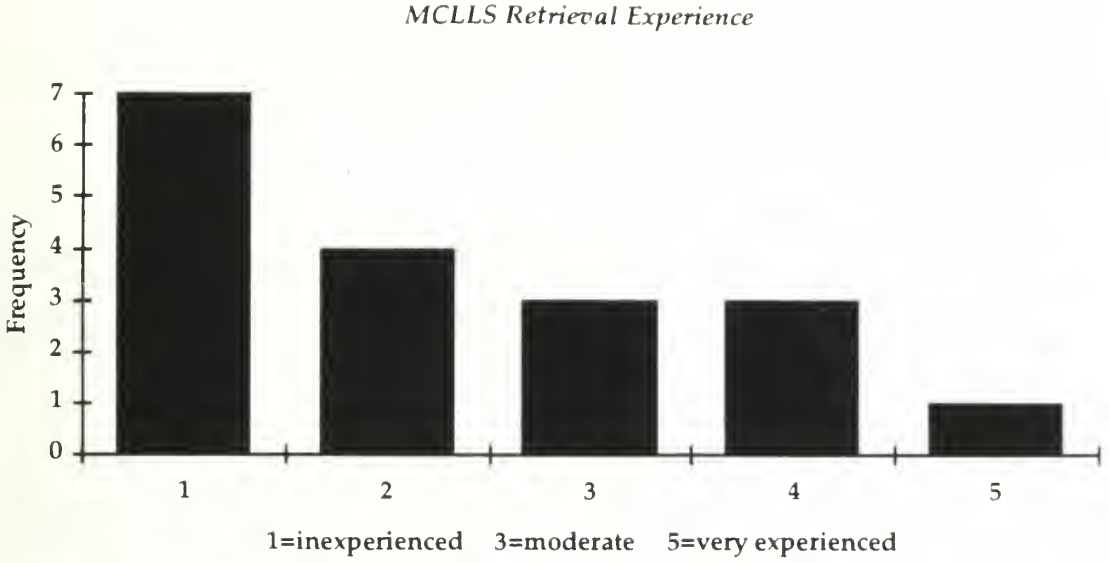
I asked this question of the eight commanders and the ten managers. Seven of the eight commanders considered themselves to be greater than moderately, coded as a 4 or 5 on the above scale, experienced with submitting MCLLS reports. The managers as a group are less experienced. Five of the ten managers rated themselves as less than moderately experienced, coded as a 1 or 2 on the scale, with submitting MCLLS reports. The consolidated mean was

3.28. The consolidated median and mode were 4.0. The following histogram portrays the distribution.



6. **On a scale of one to five, where one is inexperienced, three is moderately experienced, and five is very experienced, rate your level of experience with retrieving lesson learned from the MCLLS databases?**

I asked this question of eight commanders and ten managers. The mean response to this question was 2.28. The median was 2. The mode was 1. Eleven of eighteen interviewed scored their level of experience as less than moderately experienced, coded a 1 or a 2. Only one of eighteen considered himself to be very experienced. The following histogram depicts the distribution.



7. In your opinion, what is the purpose of the Marine Corps Lessons Learned System?

I asked commanders this question and received eight responses. I coded the data into the following groups:

Source	*Code*	*Description*	*Count*
Commanders	A	To record lessons learned...to prevent repeating similar mistakes	7
	B	Deployment preparation/training	1

Seven of the commanders had code A responses. Representative remarks were:

- *...we do not want to re-invent the wheel.*
- *...to allow ready access to information so that we can benefit from past lessons and not make the same mistakes over and over.*
- *...no reason...to make the same mistakes that someone else has already made.*

- *To help us learn from the past and not be condemned to repeat it.*

The remaining commander addressed the value of MCLLS as tool for deployment preparation and training.

8. **Does your unit store command unique lessons learned or after action reports, that are not forwarded up the chain of command, in a computer database management system?**

I asked six commanders and ten managers this question. Ten responded "Yes." The interview results show that five use MCLLS to store unit lessons learned, two store word processing files, and three stated they maintain paper files. I coded the data as follows:

Source	*Code*	*Description*	*Count*
Commanders	Y	Yes	10
& Managers	N	No	6

a. What type of software do you use?

Those who responded "Yes," to the previous response answered this question. I coded the responses as follows:

Source	*Code*	*Description*	*Count*
Commanders	M	MCLLS	5
& Managers	W	Word processing files	2
	P	Paper records only	3

b. Would you be interested in acquiring this capability?

I asked this question to those who do not store their after action comments on a database management system. Five answered yes. One respondent was not sure. Three of the five questioned expressed some concern over the lack of computer equipment and training in the Marine Corps. Another was concerned with unique reporting requirements in his organization.

9. Do Marines who do not work in the S3/G3 shop have access to the MCLLS databases?

I asked eight commanders and ten managers this question. Ten said Marines who do not work in the S3/G3 shop have access. Eight did not. There is a significant difference in how the commanders and the managers answered this question. Three of eight commanders answered "Yes." Seven of ten managers answered "Yes." I coded the data as follows:

Source	*Code*	*Description*	*Count*
Commanders & Managers	Y	Yes	10
	N	No	8

a. Are there any limitations to access?

I asked this question to the seven managers who answered "Yes" to the primary question. Four stated that access was limited by a lack of user knowledge or awareness. Their responses included:

- *Access, yes, but ...it doesn't happen. Primarily due to a lack of knowledge about the system*
- *I don't think many are aware of the system and its capabilities.*

- *I think it is probably more of a lack of understanding of what the system can provide for me.*

The remaining three respondents did not think access was limited. Their responses included:

- *We are working to improve access.*
- *Our computers are not that busy, but we could make it happen.*
- *Everyone should have access to MCLLS. We distribute fresh copies whenever we receive an update.*

b. Why not?

I asked this question to the five commanders and the three managers who answered "No" to the primary question. Responses varied. Three of the eight did not have ready access to a CD reader or the MCLLS software. Four cited a lack of knowledge. One commander stated, "Unfortunately, we never get the time to do it."

10. Has anyone in your unit received any MCLLS training?

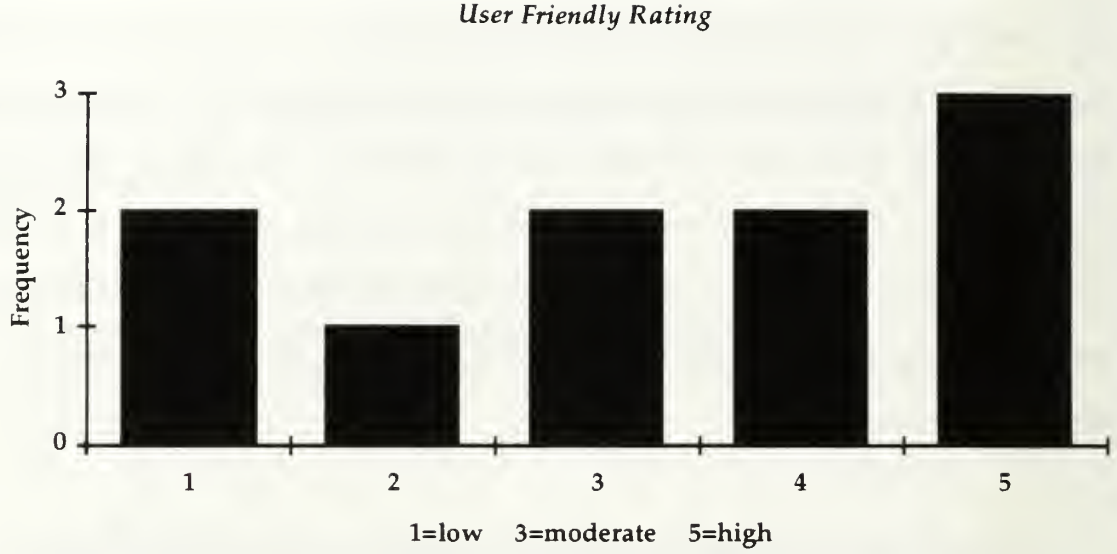
I asked this question to ten managers and two commanders. Eight stated that Marines in their unit had received MCLLS training. Two stated that they had Marines currently attending a MCLLS class. One did not know if anyone in his command had attended training. One commander stated that no one had received MCLLS training. I coded the data as follows:

Source	*Code*	*Description*	*Count*
Commanders & Managers	Y	Yes or currently attending	8
	N	No	2
	D	Don't know	2

All who had Marines attend a one or two day MCLLS class consider the training to be beneficial. On manager stated, "...I would say that the majority have been trained in house, on the job training. The one guy that I have that has been to the formal training, he seems to know the minuscule details of the systems operation." Another manager expressed a common frustration about training in the Marine Corps. He said, "We have had people trained in the past, but they transferred and took their knowledge of the system with them."

11. On a scale of one to five, with one being least user friendly, three is moderately user friendly, and five is most user friendly, how would you describe MCLLS in terms of ease of operation?

I asked this question of ten MCLLS managers. The results were relatively evenly distributed. The mean response was 3.3. The median was 3.5. The mode was 5. The following histogram depicts the distribution of responses:



C. INTERVIEW SUBMISSION PROCESS QUESTIONS

1. Do you have a designated individual conduct all MCLLS submission related tasks?

I asked the ten MCLLS managers this question. Six responded affirmatively. In all six cases, the designated individual is someone who works in the S3 office. I coded the data as follows:

Source	*Code*	*Description*	*Count*
Managers	Y	Yes	6
	N	No	4

The four managers who did not have a designated individual offered several different reasons. One has not used MCLLS. One stated, "Not really, we have had a couple of people trained on the system but there are so many computer

programs coming on-line at one time, trying to decided who is going to do all this is hard. We also have a constant turnover of trained personnel." The remaining two managers had Marines currently attending MCLLS training.

2. Have you or anyone in your unit experienced any difficulties submitting the MCLLS report in the proper format?

I asked the MCLLS managers this question. Four stated confidently that they had experienced problems. Their responses were:

- *Yes, it is mainly due to a lack of training.*
- *The problem I see is with people using keywords.*
- *We really don't know how to use the system.*
- *The problem I always have is that I like the standard topic, discussion, recommendation format...I don't have time to put it into the right format.*

Two managers stated firmly that he had not experienced submitting a MCLLS report in the proper format. Three of the five who answered "No" were less sure of their response. Their responses included:

- *No...I remember the last time I wrote one; differentiating between a recommendation, an observation, and a lesson learned, they all seemed blended together.*
- *I don't believe so.*
- *No, not at this level, battalions yes. They don't have people trained in MCLLS...after Somalia we allowed subordinate battalions to submit in word processing format.*

The remaining manager had not submitted any MCLLS reports. I coded the data as follows:

Source	*Code*	*Description*	*Count*
Managers	Y	Yes	4
	N	No	5
	Z	Zero Submissic	1

3. Has anyone in your unit submitted a MCLLS report within the past year?

I asked this question to six commanding officers and ten MCLLS managers. I coded the data into the following groups:

Source	*Code*	*Description*	*Count*
Commanders & Managers	Y	Yes	13
	N	No	5

Five of six commanders and eight of ten managers answered yes to this question. For those that responded yes, I asked follow on questions.

a. Do you feel that submitting a MCLLS report is a productive task?

I asked both groups similar questions addressing the value of submitting a MCLLS report. I coded the data into the following cat .es.

Source	*Code*	*Description*	*Count*
Commanders & Managers	Y	Yes	4
	N	No	3
	D	Don't Know or not sure	5

The responses to these questions were varied. Four answered Yes; three answered No. Five were not sure if submitting a report was productive.

b. Why do you submit MCLLS reports?

I asked five commanders and eight managers this question. I received two types of responses. Seven of thirteen interviewed discussed the importance of sharing experiences and learning from those experiences. The remaining six stated they submit MCLLS because they are required to submit reports in certain circumstances. I coded the data as follows:

Source	*Code*	*Description*	*Count*
Commanders & Managers	L	Learning from experience	7
	R	Required by command policies	6

Representative remarks addressing learning from others experiences as a reason to submit MCLLS reports included:

- *...to share our experiences...*
- *I think our experiences are worth sharing.*
- *...because we are constantly re-inventing the wheel.*
- *...so that we can learn from others mistakes.*

Representative comments addressing procedures and policies that require MCLLS submissions included:

- *It is a requirement.*
- *... at the end of every exercise we are told to submit MCLLS.*
- *Because we are told to submit reports.*

c. Do your MCLLS submissions differ significantly from the information contained in unit after action reports?

I asked four commanders this question. Two answered "Yes" and discussed the need to keep some issues internal to their command. Two

answered "No." In some units MCLLS and after action reports are interchangeable phrases. I coded the data as follows:

Source	*Code*	*Description*	*Count*
Commanders	Y	Yes	2
	N	No	2

d. What type of circumstances would cause you to submit a MCLLS report?

I asked the eight managers who have submitted MCLLS reports this question. All eight responded that they submit MCLLS reports after major exercise or operations. I coded the data as follows:

Source	*Code*	*Description*	*Count*
Managers	M	Major exercises or operations	8

Sample remarks included the following:

- *...it is exercise related.*
- *...unique deployments and major exercises.*
- *...major operations.*
- *...following Somalia.*

e. Do you use the MCLLS Instructional Input Program (MIIPS) to write and submit MCLLS reports?

I asked the six managers who have submitted MCLLS reports this question. Three replied "Yes." The remaining were not sure. I coded the data as follows:

Source	*Code*	*Description*	*Count*
Managers	Y	Yes	3
	D	Do not know or not sure	3

4. If a Marine in your unit wanted to submit a lesson learned to Headquarters, U.S. Marine Corps, how would he do it?

I asked two commanders and ten managers this question. Eight responded that a Marine would contact someone in the S3 office to submit a report. The remaining respondents stated that the software to write MCLLS is readily available and a Marine could write it himself. After it is typed, the Marine would then forward it to the S3 office via the chain of command. I coded the data as follows:

Source	*Code*	*Description*	*Count*
Commanders & Managers	S	See someone in the S3 office	8
	T	Type it yourself, then via the S3 office	4

Typical comments classified as code S were:

- *...the Marine would put a rough idea on paper...it would go to the S3 or commanding officer.*
- *I guess via me the S3 officer.*
- *See the S3 clerk.*

Typical comments classified as code T were:

- *...we have the system on deployable laptops that we set aside for operations.*
- *Anyone who knows how to do it can write one up*
- *The new format is on the local area network "H" drive. anyone can use it.*

5. How are lessons learned submissions reviewed in your chain of command?

I asked seven commanders this question. Five responded that they are reviewed by operations officers or by the commanding officer. One responded that they are reviewed at every level in the chain of command. One commander stated that he did not view the submissions until after they were sent to the MCLLS office. I coded the data as follows:

Source	*Code*	*Description*	*Count*
Commanders	S	By the S3 officer or the Commanding Officer	5
	C	At every level in the chain of command	1
	N	Not reviewed until after submission	1

6. From your perspective, are there any obstacles that hinder the submission of lessons learned via the chain of command?

I asked eight commanders this question. Five responded that from their perspective there are no obstacles. The three respondents that perceived obstacles addressed such issues as administrative burdens, operating the software, and a filtering process as the reports are screened at each level in the chain of command. I coded the data as follows:

Source	*Code*	*Description*	*Count*
Commanders & Managers	Y	Yes	3
	N	No	5

7. The number of MCLLS submissions to HQMC has decreased significantly over the past twelve months. One suggestion to encourage MCLLS submissions is to reduce the influence by those in the chain of command by allowing Marines to submit a lesson learned directly to headquarters. What do you think of this proposal?

I asked eight commanders this question. Six responded that they support the proposal. Two commanders were opposed, primarily on the grounds that it would violate the chain of command. I coded the data as follows:

Source	*Code*	*Description*	*Count*
Commanders	S	Support the proposal	6
	O	Opposed to the proposal	2

Responses that support the proposal included:

- *I don't have a problem with that as long as we are kept in the loop.*
- *It would foster openness...*
- *Gee that would be nice.*

Responses that oppose the proposal included:

- *There is no way that I would send something to HQMC without telling my boss what I was sending and what I was doing.*
- *...some of the greatest benefit from MCLLS is allowing the chain of command to hear recommendations from subordinate commands.*

8. **Have you or anyone from your unit submitted a MCLLS report and had that report modified or rejected at a higher level in your chain of command?**

I asked eight commanders this question. Three responded that they had reports modified or rejected. The remaining five were not aware of any reports being modified or rejected. Reasons given for report modification or rejection include: minor editorial changes and different perceptions about the relevance for Marine Corps wide distribution. I coded the data as follows:

Source	*Code*	*Description*	*Count*
Commanders & Managers	Y	Yes	3
	N	No/Not aware	5

9. **Have you ever modified or rejected a MCLLS report?**

Seven commanders answered this question. Five had modified or rejected a MCLLS report. Reasons for such actions included: the submission lacked merit and some things should remain internal to the unit. One commander said, "You get people's attention real fast by pissing them off, but after you've got their attention, you've lost them for good." Two commanders have not rejected or modified a report. I coded the data as follows:

Source	*Code*	*Description*	*Count*
Commanders & Managers	Y	Yes	5
	N	No	2

10. Has anyone in your chain of command encouraged you to submit MCLLS reports?

I asked this question of eight commanders and ten managers. All eight commanders and seven of the ten managers received some sort of encouragement. Types of encouragement included unit standard operating procedures, discussions at exercise planning conferences, and verbal encouragement from commanding officers and a commanding general. I coded the data as follows:

Source	*Code*	*Description*	*Count*
Commanders & Managers	Y	Yes	13
	N	No	5

11. During my research, numerous Marines have discussed the importance of "saving face" by accentuating the positive benefits and overlooking the negative aspects of a given lesson learned when submitting a MCLLS report. In your opinion, does "saving face" play a role in the lessons learned process?

I asked eight commanders this question. Six responded that "saving face" does play a role. Two do not believe that "saving face" plays a role. I coded the data as follows:

Source	*Code*	*Description*	*Count*
Commanders & Managers	Y	Yes	6
	N	No	2

Typical responses that discuss saving face included:

- *Saving face is not what the system is designed for, there may have been some manipulation of the system...*
- *No one wants to look bad.*
- *Sure, I think it is part of the Marine tradition, that Marines will not fail no matter what.*

12. Would you submit a lesson learned that reflected poorly on your organization?

I asked five commanders this question. All five replied that they would forward a MCLLS report that was unfavorable to their unit. Some qualified their response by stating that they would be careful how they worded the report. One commander said he would "sugar coat it." I coded the data as follows:

Source	*Code*	*Description*	*Count*
Commanders	Y	Yes	5

D. INTERVIEW RETRIEVAL PROCESS QUESTIONS

1. Do many members of your unit know how to access the MCLLS lessons learned database to retrieve information?

I asked this question to the MCLLS managers. Seven of the ten managers answered "No." One of the two who answered "Yes" then explained that only one person knew how to retrieve a lesson learned. Only one manager believed that many members in his unit could retrieve a lesson learned. He said, "I would say regiment wide, maybe twenty-five to thirty

Marines, primarily in the S3 shops. Another manager was not sure if many knew how to access and retrieve a lesson learned. I coded the data as follows:

Source	*Code*	*Description*	*Count*
Managers	Y	Yes	2
	N	No	7
	D	Don't know or not sure	1

I asked the Marines who answered "No," why not? Seven believed their Marines lack an adequate understanding of MCLLS and its capabilities. Their comments included:

- *It is not a highly publicized system. It gets a lot of attention at the general staff level, but anything outside of the G-3 it receives little attention.*
- *They are not aware of the system's capabilities.*
- *I just learned how to do it myself about a month ago.*
- *I guess maybe one or two people are familiar with the system.*
- *Probably none, We just have not been exposed to it.*
- *It is mainly a lack of training and awareness.*

One manager who answered "No" explained that he didn't have a need to use MCLLS. He said, "The types of operations that we do, the guidance is pretty direct and the tasks are fairly routine. Our personnel are experienced and the planning guidance from the commanders is detailed so we really don't need to use the MCLLS database."

2. To the best of your knowledge has anyone in your unit experienced any difficulty operating the MCLLS software to retrieve a lesson learned?

I asked this question of ten managers. Only two managers stated that they had experienced problems operating MCLLS. Both addressed the lack of understanding of how the software functions. Two managers said they do not use the software to retrieve lessons learned and another said, "we use it so rarely that I don't know if anyone has experienced any problems." Sample responses coded as "No" were:

- *No, I mean the program works, we just don't use it that often.*
- *No, the only problem we have experienced was when one search tied up the computer for hours.*
- *No, but we know who to call if we have any problems.*
- *Only some of the new operators.*

I coded the data as follows:

Source	*Code*	*Description*	*Count*
Managers	Y	Yes	2
	N	No	5
	D	Don't know or don't use MCLLS	3

3. Do you or anyone in your unit use the MCLLS databases to search for lessons learned?

I asked this question of seven commanding officers and ten managers. Eleven of the group said they did search the database while six admitted that they did not. Seven of the eight commanders and fifty percent of the managers said their command conducts MCLLS searches. I coded the data as follows:

Source	*Code*	*Description*	*Count*
Commanders & Managers	Y	Yes	11
	N	No	6

For those who answered "Yes" or "No," I asked different follow on questions.

a. What types of searches are conducted?

I asked this question to those who responded "Yes." Nine of the eleven searched the databases for information on previous operations or exercise. The remaining two conducted keyword searches. I coded the data as follows:

Source	*Code*	*Description*	*Count*
Commanders & Managers	O	Previous operations & exercises	9
	K	Keyword searches	2

Typical responses for code O were:

- *...Desert Shield/Storm and Somalia.*
- *Previous operations.*
- *CAX's or similar exercises*
- *We look for the same subject line as the upcoming exercise.*

Four of the respondents said they searched the MCLLS database prior to deploying to Somalia. One manager said, "...I tell you when the balloon went up for Somalia, the first thing people asked to see were the MCLLS items. People may say that they don't like them but when the shit hits the fan, it is the first thing they want to have."

b. Are the searches generally helpful?

I asked this question of eleven Marines who had answered "Yes" to the primary question. Six found the searches to be generally helpful. Five did not. Interestingly, four of the six commanders did not find the searches to be helpful, while four of the six managers did find the searches helpful I coded the information as follows:

Source	*Code*	*Description*	*Count*
Commanders & Managers	H	Generally helpful results	6
	N	Not generally helpful results	5

Comments classified as code H included:

- *...it depends on the keywords used.*
- *...during Emerald Express work ups we found some good information....*
- *We recently pulled down some records from previous CAX's. They have been staffed.*

Comments classified as code N included:

- *...it is minimal. When we searched the database there were 15 or 18 things and it didn't really help us.*
- *It is like trying to get information out of a black hole.*
- *Lack of information in the database.*

c. How often do Marines in your unit conduct lessons learned searches of the MCLLS database?

I asked this question of the five managers who reponded "Yes" to the primary question. All five replied infrequently. I coded the information as follows:

Source	*Code*	*Description*	*Count*
Managers	I	Infrequently	5

Comments coded as I included:

- *...before major exercises.*
- *Rarely.*
- *Maybe once a month.*
- *Semiannually.*

d. Why not?

I asked this question to the seven Marines that do not use MCLLS to search for lessons learned. I coded the data as follows:

Source	*Code*	*Description*	*Count*
Commanders & Managers	L	Lack of knowledge of MCLLS	5
	O	Other reasons	2

Comments classified as code L included:

- *...lack of knowledge of the system.*
- *We never saw the need to use the system.*
- *Not familiar, not comfortable with it...don't know the systems capabilities.*
- *Part of it is lack of training on our part.*

Comments classified as code O included:

- *It is just not a priority.*
- *We are too busy.*

4. If a Marine in your unit wanted to search a MCLLS database for lessons learned, how would he do it?

I asked the ten managers this question. Seven responded that the individual could contact the S3 officer or one of his clerks. Three stated that they would have to seek assistance from a higher headquarters. I coded the information as follows:

Source	*Code*	*Description*	*Count*
Managers	S	Contact the S3 officer/clerk	7
	H	Contact higher headquarters	3

E. INTERVIEW MCLLS EFFECTIVENESS QUESTIONS

1. I have reviewed numerous lessons learned from the MCLLS database. One trend that stands out is that very few of the submissions indicate that their unit made a mistake, rather they seem to point the finger at an external cause. Do your experiences with MCLLS concur with my observations?

All eight commanders answered this question and affirmed the observation. Four attributed this trend to human nature. Two explained that if faced with a problem and that problem is within your ability to correct, then it would be fixed and would not be a lesson learned. Therefore, there is a bias toward writing lessons learned about issues that are beyond the writer's influence, which in reality implies external agencies. I coded the data as follows:

Source	*Code*	*Description*	*Count*
Commanders	Y	Yes	8

2. In your opinion, would increased access to the MCLLS software improve learning in your organization?

I asked this question to eight commanders. Seven answered affirmatively. One stated that he was not prepared to answer this question. I coded this data as follows:

Source	*Code*	*Description*	*Count*
Commanders	Y	Yes	7
	D	Don't Know	1

Four responded that it would make it easier to retrieve useful information. Two discussed the advantage of accessing information on the individual's own time.

3. Have lessons learned from the MCLLS databases helped you to better perform your job?

I asked this question to eight commanders and ten managers. Overall, ten said "Yes," and eight answered "No." Five of eight commanders and five of ten managers responded "Yes." I coded the data as follows:

Source	*Code*	*Description*	*Count*
Commanders & Managers	Y	Yes	10
	N	No	8

a. How has it helped?

I asked this question of those who answered "Yes" to the primary question. Seven of the ten believed that MCLLS enabled them to plan more effectively. Other responses included improving service, confirming ideas,

and encouraging analysis of operational lessons. I coded this information as follows:

Source	*Code*	*Description*	*Count*
Commanders & Managers	P	Improved planning	7
	O	Other benefits	3

b. Have you benefited from MCLLS in any way?

I asked this question to those who responded "No" to the primary question. Seven of eight answered "No." One manager said, "Probably as point of reference... but it has not been a particular help in this job."

Source	*Code*	*Description*	*Count*
Commanders & Managers	Y	Yes	1
	N	No	7

4. Has submitting MCLLS reports or using the database impacted your methods of conducting business?

I asked this question to seven commanders and ten managers. Twelve of seventeen answered "No." I coded the data as follows:

Source	*Code*	*Description*	*Count*
Commanders & Managers	Y	Yes	5
	N	No	12

Comments coded Y included:

- *I think it gives you a different perspective and makes you think about different things.*
- *...only that we now incorporate the MCLLS format in our after action reports.*
- *...it probably prevented us from making some mistakes that we may have made otherwise.*

Comments coded as N included:

- *... things we have gotten out of MCLLS have been interesting reading, not necessarily things that we didn't know...*

5. How would you evaluate MCLLS impact on promoting learning throughout the Marine Corps?

I asked this question of eight commanding officers. Two stated MCLLS has had a positive impact, although one qualified his opinion by stating, "I think it is excellent if it is used. There is a lot to be gained." Six of eight commanders stated that it has had no effect on promoting learning. I coded the data as follows:

Source	*Code*	*Description*	*Count*
Commanders	P	Positive impact	2
	N	No effect	6

Although most answered this question with one word, either yes or no, two comments that I coded as N, No effect, provide a useful insight:

- *...a great deal of time and effort have gone into preparing and sending these things into a black hole and very little has come back out.*
- *Negligible...operators are too busy.*

6. If you had to purchase MCLLS software with your own funds, would you buy it?

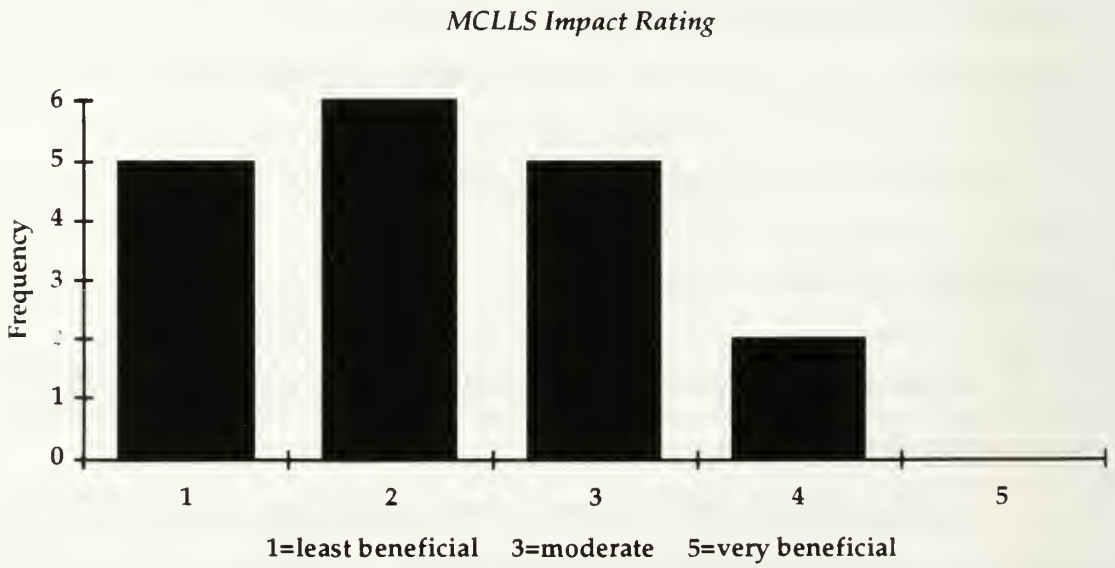
I asked this question of eight commanders. Three stated they would buy it. One said up to $300, one said up to $500, and another said whatever it

would take. One of the five that would not buy the software did say, "...if I did buy it, I would probably use it more." I coded the data as follows:

Source	*Code*	*Description*	*Count*
Commanders	Y	Yes	3
	N	No	5

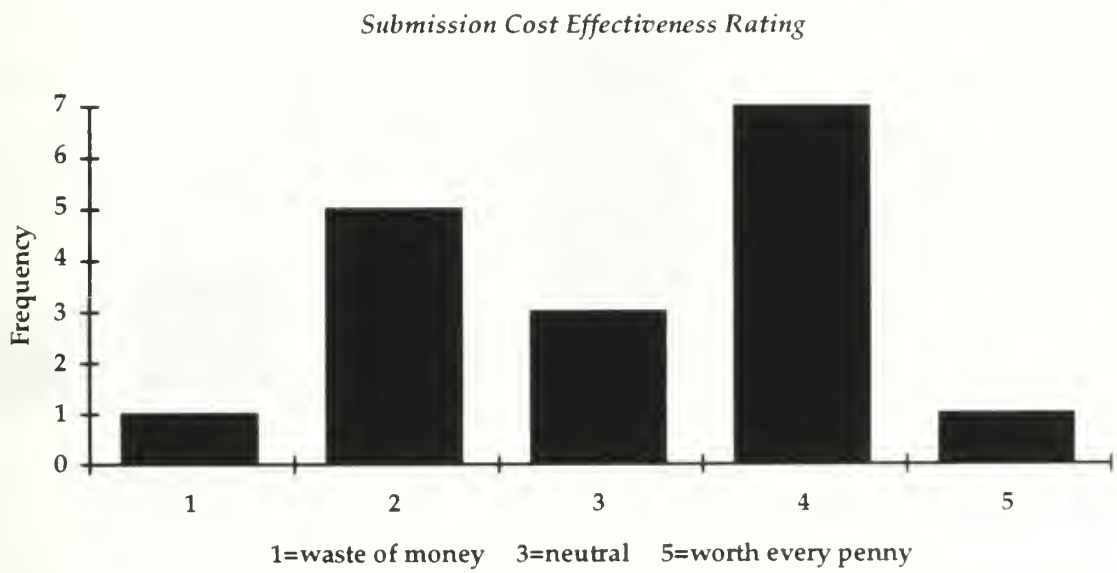
7. On a scale of one to five, where one is least beneficial, three is moderately beneficial, and five is very beneficial, how do you rate MCLLS impact on your unit?

I asked this question of eight commanders and ten managers. The mean response was 2.22. The median and mode were 2. Eleven of eighteen considered MCLLS to be less than moderately beneficial, coded as a 1 or 2, to their unit. None of those interviewed considered MCLLS to be very beneficial. The following histogram shows the distribution of responses:



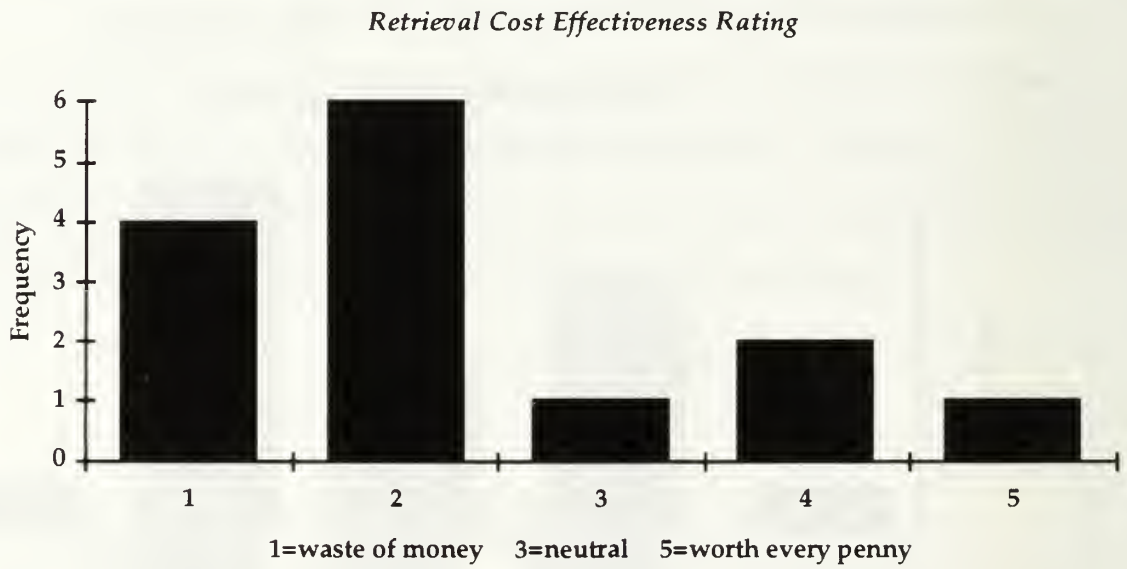
8. **On a scale of one to five, where one is waste of money, three is neutral, and five is worth ever penny, how do you rate the cost effectiveness of MCLLS in terms of your time invested to submit lessons learned?**

I asked this question of six commanding officers and ten MCLLS managers. The responses were varied. The mean response was 3.125. The median was 3.5. The mode was 4. One commander believed MCLLS is worth every penny. One manager responded that MCLLS is a waste of money. The following histogram displays the distribution:



9. **On a scale of one to five, where one is a waste of money, three is neutral, and five is worth ever penny, how do you rate the cost effectiveness of MCLLS in terms of your time invested to find and apply a lesson learned from the MCLLS databases?**

I asked this question of seven commanders and seven managers who had retrieved lessons learned from MCLLS. Ten of the fourteen responded unfavorably, coded as a 1 or a 2. The mean response was 2.28. The median and mode were 2. The following histogram shows the distribution.



10. **Do you have any suggestions to improve the system?**

I asked this question of eight commanders and ten managers. Some provided multiple suggestions, others offered only one. I coded each suggestion made; therefore, the number of responses to this question exceeds

the number of people interviewed. I coded thirty-two comments and placed them into seven catagories as follows:

Source	*Code*	*Description*	*Count*
Commanders & Managers	A	Improve access to MCLLS	4
	C	Place more command emphasis	2
	E	Improve education and training	8
	F	Improve feedback to the user	2
	L	Encourage use in lower organizational levels	2
	O	Other	7
	U	Improve user friendliness	4
	V	Advertise MCLLS capabilities	4

Eight suggestions recommended improving education and training. Twice as many managers suggested improving education and training as the next closest suggestion, improved access. Sample responses coded as E, Improve education and training were:

- *I think education is important.*
- *Educate the Marine Corps, target the S3 shops.*
- *Better education effort at all levels.*

Improve access to MCLLS, improve user friendliness, and advertise MCLLS capabilities were each suggested by four interview subjects. Representative comments coded as A, improve access to MCLLS were:

- *It most comes down to access to the system.*
- *Instant access to the databases.*
- *... more accessible.*

Comments coded as U, improve user friendliness, included:

- *Improve user friendliness.*
- *...the system needs to be easy to use....*
- *...the user manual could be made more user friendly....*

Comments coded as V, advertise MCLLS capabilities, included:

- *I think it has to be better advertised in the sense that what is in the system, how to get availability to it and how it works.*
- *... it should be marketed.*
- *... get the word out....*

Two respondents suggested placing more command emphasis on MCLLS. Their suggestions were:

- *We could use more emphasis from the commanders to make people use it...*
- *... a way to improve MCLLS would be to assign a MCLLS officer... in charge of tracking and monitoring the program.*

Two commanders recommended providing more feedback to the MCLLS user. Their comments were:

- *There is not that loop that gets back to us to give us a return on our investment.*
- *The feedback issue, if something doesn't seem worth doing, they won't do it.*

Two interview subjects advocated the need to encourage use at lower organizational levels. Their comments were:

- *Another improvement would be to get it down to the battery/company level...I think that would help because the guys are most impacted and the ones that could benefit most are the guys at the lowest levels in the Marine Corps.*

- *I don't think we have enough computer assets...down at the tactical units. That is where you make all your money, not at the higher staff levels. Those are the guys who have to carry out the grandiose plans and if they can not do that effectively, then we are wasting our time.*

The comments coded O, Other, are seven unique suggestions. They were:

- *We should evaluate the system first...*
- *Figure out a better input process and a better process for extraction.*
- *Improve timeliness of the database. Old news may be worthless.*
- *We need to create a "Prodigy" like information highway.*
- *Improve methods of creating export files...It gets kind of confusing when you have to export files and they all have similar names.*
- *I think the format is cumbersome. I wish they would just go back to topic, discussion, recommendation.*
- *The system is broke because commanders are placing more restrictions on the system than was originally intended.*

F. ARCHIVAL DATA RESEARCH

After interviewing MCLLS managers and commanding officers, I examined the MCLLS databases to seek answers to some of the issues addressed by the interview subjects. In this section I discuss the results of database searches. I examine the type of lessons learned that are in the databases, who writes the lessons learned, the type of lessons learned in the Remedial Action Program, and the type and tone of the headquarters responses to Remedial Action Program items.

1. Lesson Learned Subject Categories

I sought to identify what type of lessons learned make it into the MCLLS databases. Currently two databases are included on the compact disc that is distributed throughout the Marine Corps. The "RAP" database contains all lessons learned selected for review through the Remedial Action Program (RAP). The "USMC" database contains the remaining lessons learned that are not selected for the RAP. I used the MCLLS Administrative Search option and searched by Subject Code. The following chart lists the subject codes and the number of lessons learned in each category:

Subject Code	Database	
	RAP	USMC
Administrative	161	726
Communications	69	729
Deployment	9	200
Education	0	7
Facilities/Support	0	1
Organization	0	0
Intelligence	49	363
Logistics	375	2023
Mobilization	43	143
Operations	481	2546
Equipment	5	1
Training	0	0
Command & Control	65	401
Doctrine	12	25

The MCLLS administrators at MCCDC code the subject category based on the content of the lesson learned. Each lesson learned may have only one subject code.

2. Remedial Action Program Lessons Learned

The Remedial Action Program (RAP) monitors selected lessons learned that identify deficiencies in doctrine, organization, training, education or equipment. A formal committee, the RAP Working Group, assigns each lesson learned received to an Office of Primary Responsibility (OPR) and manages the remedial action process. The Office of Primary Responsibility researches each lesson learned and categorizes each as either "Noted," "Procedural," or "Remedial Action." The following list defines each category:

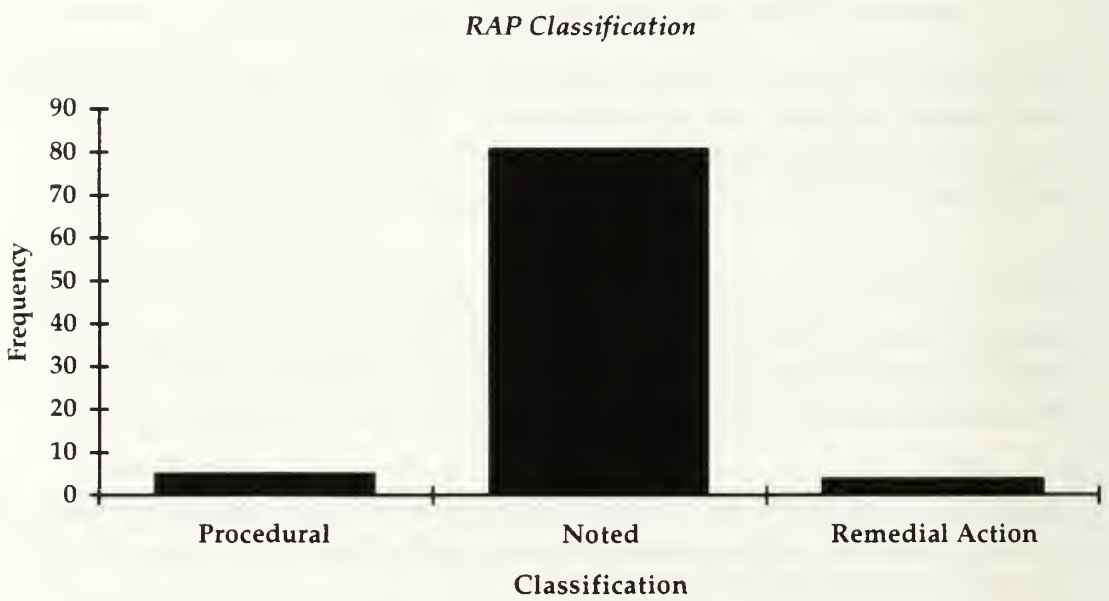
NOTED is an item that does not require corrective action or for which an established program exists that is already taking the recommended corrective action. Positive comments about procedures, tactics, techniques, etc., that worked well belong in this category.

PROCEDURAL is an item that does not require corrective action. This category may be assigned when an established program or corrective action already exists, or when it was determined that the deficiency occurred because established procedures were not followed.

REMEDIAL ACTION is a written description of a deficiency or shortfall in existing doctrine, organization, training and education, or equipment which may be corrected by specific action.

Lessons learned categorized as "Noted" or "Procedural" require no further action at the Marine Corps Combat Development Command

(MCCDC). I hypothesized that if the Marine Corps Lessons Learned System were effective at promoting change, then I would expect to see a large number of lessons learned assigned the "Remedial Action" code indicating that the MCLLS had initiated some sort of change to correct an identified deficiency. I searched my random sample of one hundred lessons learned from the RAP database for classification comments. Ninety of the 100 lessons learned contained specific comments that place the lesson learned in one of the three categories. My sample showed that 81 of the 90 were coded as "Noted" items, 5 of the 90 were coded as "Procedural" and 4 of the 90 were coded as "Remedial Action." The following chart shows the distribution of classification comments:

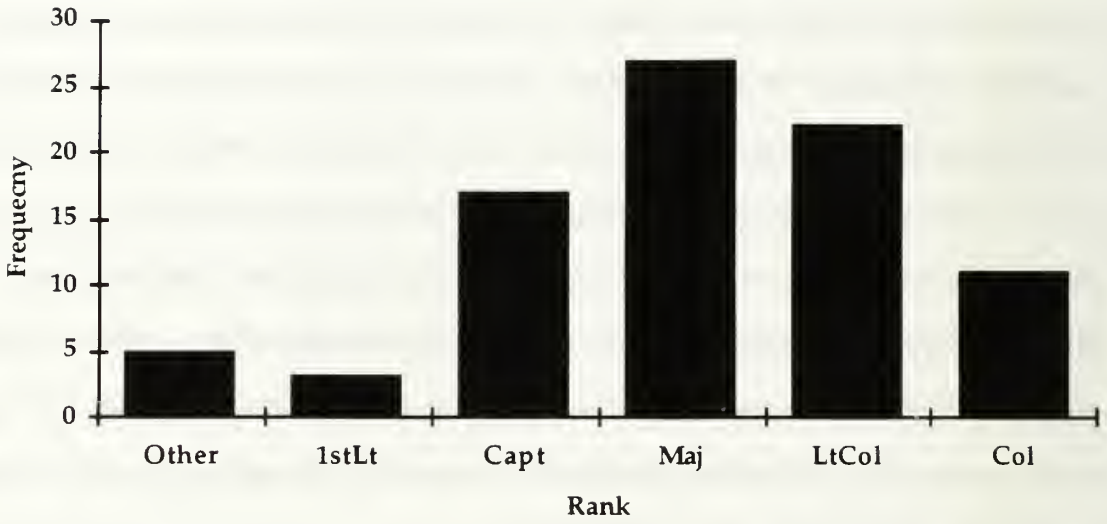


3. MCLLS Authors

A learning organization encourages suggestions for improvement from all levels of the Marine Corps. I investigated this issue by searching my random sample for the author's rank. The MCLLS formatted report does not provide the authors name. It does provide the name and rank of a point of contact. The Marine Corps MCLLS order defines the point of contact as the individual who can best answer questions concerning the submitted lesson learned. Given that standard Marine correspondence procedures include the author as a point of contact, it is reasonable to assume that the point of contact is the person who wrote the lessons learned report. I coded each lesson learned and counted the frequency of each rank.

Once again I used my random sample of one hundred lessons learned from the RAP database. In my random sample, 85 of the 100 lessons learned identified a point of contact. The data revealed that over 70% of the MCLLS listed a field grade officer, major, lieutenant colonel, or colonel, as the relevant point of contact. Interestingly only three First Lieutenants, no Second Lieutenants, four Warrant Officers, and one Civil Service Employee are points of contact. None of the lessons learned listed an enlisted Marine as a point of contact. The following chart show the distribution of the rank of the points of contact.

MCLLS Authors



4. Remedial Action Program Comments

Upon completion of the remedial action process, the Office of Primary Responsibility or the Remedial Action Working Group include closing comments in paragraph nine of each lesson learned. In my random sample of one hundred lessons learned 90 of the 100 lessons learned contained comments. I coded the data into three groups that categorize the formal response from the headquarters level of the organization. I coded the RAP comments as pro forma responses, tailored responses, or acknowledgement responses.

a. Pro forma responses

I define pro forma responses as those that cloak the answer to identified problems in organizational policies, procedures, regulations yet

have not initiated any action to resolve the issue. Many of the pro forma responses did not even address the identified problem. One signal of a pro forma response is repeated references to Marine Corps Orders (MCO) or Fleet Marine Force training manuals (FMFM). Comments that I coded as pro forma responses include:

- *If FMFLANT believes a requirement exists within the Marine Corps for more than one MEB's worth of extreme cold weather clothing, the matter should be documented and referred to MCCDC for validation...The appropriate procedure would be to submit an allowance modification request to CMC (LPP) in accordance with paragraph 6b of MCO 4000.1F, the policy order which addresses Type 3 (special control) items and MCO 4400.172, the order addressing requests for changes in allowance.*

Recommendation should originate from the SRI Group Commander for applicable billet increases in accordance with MCO 5311.1A....

- *FMFM 7-1, Fire Support Coordination states that.... FMFM 2-7,... FMFM 6-18,... and FMFM 5-60 identify the need for the co-location of the FSCC/DASC.*

- *Recommendation should originate from the MEF Headquarters Element structure sponsor, MCDCC(WF-11), in coordination with HQMC (DEN), for the applicable T/O modification in accordance with MCO 5311.1A.*

- *If this is a valid wartime requirement, then the proper procedure is to submit the request to the Joint Staff (Military Personnel Manpower) for validation and inclusion on the Joint Table of Mobilization Distribution.*

- *The parent command should support the need to have sufficient medical support available to their subordinate commands. Doctrine is available for the medical officer to recognize needs by TO/TE based on support preplanning.*

- *Chapter 2, paragraph 2-8, TM 4790/14.1c applies.*

- *Refer to MCLLS 52258-11622.*

- *M&RA does not get involved until a structure sponsor proposes a plan for realigning current Manpower resources - then M&RA undertakes the analysis and makes recommendations or takes action. Submit T/O change requests per MCO 5311.1A.*

b. Tailored responses

Tailored responses answered the issues addressed in the MCLLS report. The response addressed the comments and recommendations in the lesson learned and provided constructive feedback to the lesson learned author. Tailored responses did not indicate any corrective actions in process or any plans to take action. They did explain reasons why no action was possible or likely at this time Sample comments that I coded as constructive responses include:

- *The established operational requirement for ECM and DECM equipment is one set per aircraft. Fiscal constraints do not allow us to fully fund the requirement, thus we purchase approximately two thirds of what we need....*

- *The F/A - 18E/F will be thoroughly tested with 480 gallon tanks. The Canadian testing suits their limited use of the 480 gallon tanks. Howevet the tests do not satisfy DON requirements; specifically: flutter, ordnance separation and jettison testing.*

Other constructive responses contained multiple pages of precise answers to the lessons learned and recommended course of action in the MCLLS report.

c. Acknowledgment responses

Responses coded as acknowledgment responses indicate that the Marine Corps recognizes the problem and had initiated corrective action. The response typically acknowledges that a problem exists and provides the MCLLS author with an update of HQMC/MCCDC/MARCORSYSCOM efforts to take corrective action. The following list contains comments coded as Acknowledgment responses with corrective action already in progress:

- *AAA currently evaluating the problems with the final drives and undertaking engineering design improvements for this subsystem.*

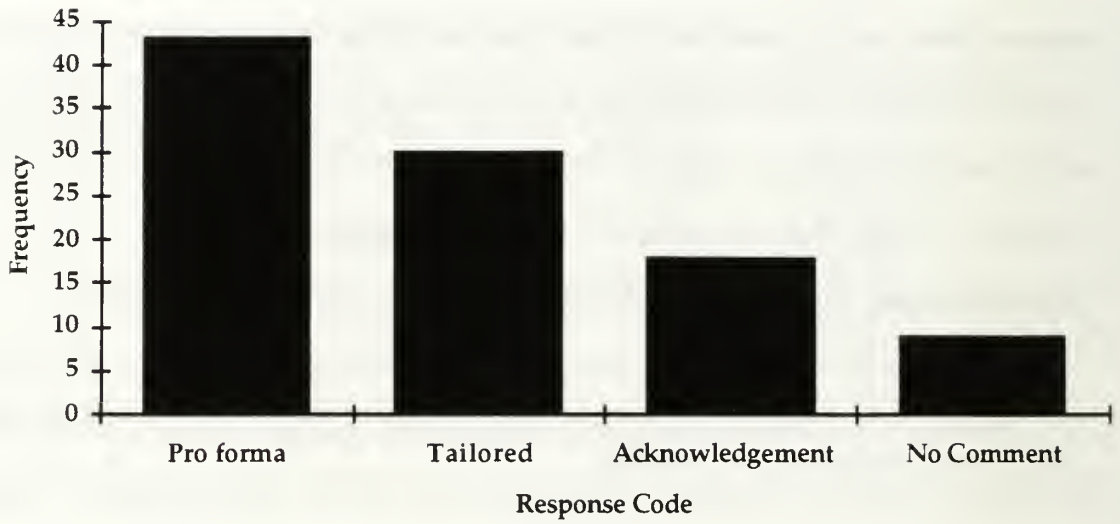
- *HQMC (C4) addressed this problem of DCT communications aboard Naval ships with CNO (OP94) in December 1988. OP94 and the Space and Naval Warfare Systems Command have produced an interface box which fixes the DCT interface problem.*

- *Doctrinal changes are being conducted in Joint Pub 6-0 and Joint Pub 6-2. FMFM-3 (Command and Control Systems) will provide the keystone of doctrine for MAGTF command and control.*

- *Chapter 13 of MCO 4400.39 has recently been rewritten and addresses the recommended action of this MCLLS item.*

The following chart depicts the distribution of RAP comments:

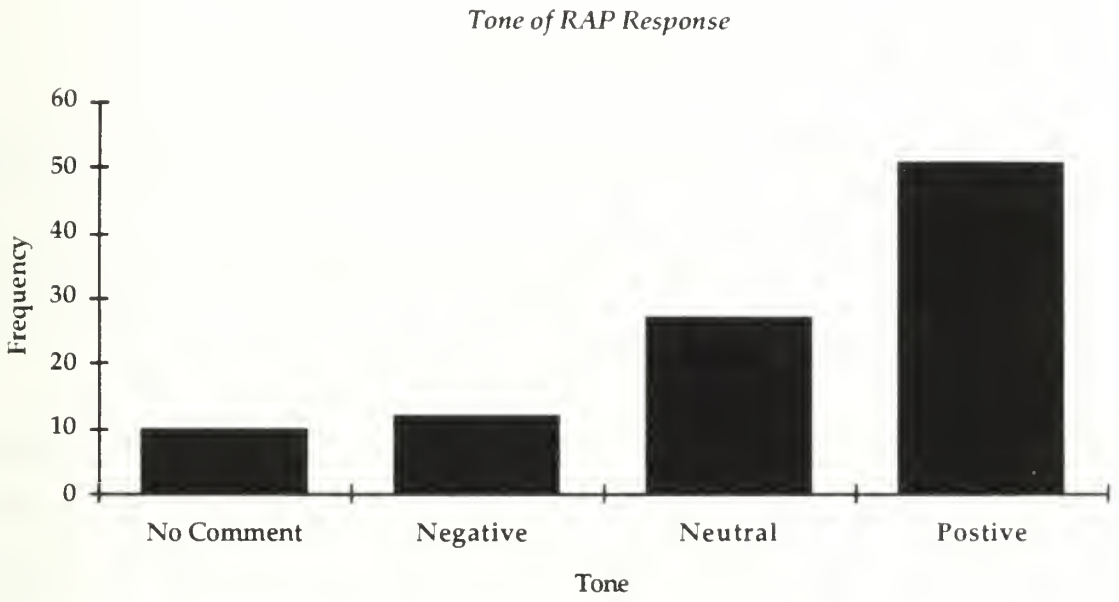
Remedial Action Program Comments



5. RAP Response Tone

I used my random sample of 100 lessons learned from the RAP database to examine the tone of the response from the headquarters level of the organization. I coded the tone of each response as positive, neutral, or negative. Positive tone responses included statements of agreement with comments in the lesson learned or recognition that a problem exists. Neutral tone responses neither indicate support nor disagreement with the lesson learned and recommendation in a MCLLS report. Negative tone responses indicated disagreement or disapproval with the lesson learned or the recommended course of corrective action. Ten percent of the sample contained no comments.

Although I coded most of the RAP comments as positive or neutral, twelve of the comments were distinctly negative. The following chart shows the distribution of the RAP comments coded by the tone of the response.



The following list displays some responses coded as having a negative tone. To give the reader a better understanding of each response, I have included a summary of the author's lesson learned prior to the headquarters RAP response:

- *LESSON LEARNED* *Towing procedures disabled M1A1 tanks. Recommend placing warning notices in operators manuals and emphasize issue in formal courses of instruction*

  RESPONSE *Tanks can be towed by other tanks providing procedures in TM-9-2350-264-10-2, page 2-450 are followed. Existing procedures to warn crew members are adequate. Unit SOPs are the responsibility of the Commander and should have addressed towing procedures in detail.*

• *LESSON LEARNED* *During Desert Storm, units lacked sufficient blankets to protect prisoners of war from the elements. Recommend storing low cost, emergency "space blankets" in war reserve.*

RESPONSE *This is not RAP item material! The Force commander can come into HQMC with a request for allowance, Type 2 item, and if HQMC approves the request, he can turn around and spend his limited dollars on blankets for EPW's....Any good supply officer at the MEF level would be aware of this.*

• *LESSON LEARNED* *Discussed performance of A-6 aircraft and recommended several improvements.*

RESPONSE *Since all Marine A-6s will be retired within two years, it is hard to call the A-6 the "cornerstone of the Marine Corps aviation's attack capability."*

• *LESSON LEARNED* *Offered several suggestions to improve the standard issue first aid kit.*

RESPONSE *The discussion and recommended action are largely useless.... If the author can provide relevant statistics on how many battle field wounds went untreated because either the first aid kit lacked certain items the problem can be better evaluated...From a personnel standpoint, do not concur in the author's assessment on either item..*

• *LESSON LEARNED* *During Desert Storm many containerized boxes from prepositioned war reserves lacked adequate identification markings.*

RESPONSE *...the boxes/containers are labeled in accordance with the plans established by the MEF which is undergoing the maintenance cycle. If the MEF personnel are not familiar with the plans that they put together, it is understandable that some confusion would exist during the off load. It would appear that the MEF needs to better train/educate their personnel with MPF maintenance cycle planning to preclude similar instances from occurring in future operations.*

V. ANALYSIS

A. INTRODUCTION

As indicated earlier, this thesis assesses MCLLS as an effective tool to promote organizational learning. I divide the discussion into two parts: I evaluate MCLLS as an effective tool and I discuss the outcome, organizational learning. Each section in this chapter addresses a different measure of effectiveness.

No methods of evaluating MCLLS existed prior to this study. To answer the research question, I established the following set of criteria to judge MCLLS as an effective tool:

- *Marines should use the system.*
- *MCLLS should be part of the organizational routine.*
- *Marines throughout the organization should have access to MCLLS.*
- *MCLLS should be easy to use.*
- *Marines should be trained to use the system.*
- *MCLLS should be cost effective.*
- *Marines should be satisfied with the system.*

I will evaluate the tool's effectiveness on organizational learning by using the learning continuum model. The learning continuum model describes three levels of organizational learning. Huber's model, at the lower end of continuum, describes organizational learning as the aquisition of potentially useful information. Argyris and Schon's single-loop model requires the identification and correction of error. I place single-loop learning at a moderate level on the continuum. Double-loop learning demands the underlying cause of a problem to be identified and corrected. It is on the high end of the scale of organizational learning. To evaluate organizational learning, I use the following criteria:

- *MCLLS should promote an open exchange of information.*

- *Information retrieved from MCLLS would lead to changes in organizational practices.*

B. AN EFFECTIVE TOOL?

1. Do Marines Use MCLLS?

The research data indicates that overall usage of MCLLS by Marines is low. Marines submit lesson learned following major exercises which occur infrequently. Marines attempt to retrieve lessons learned from the MCLLS databases on occassion. It is not a common occurrence.

a. MCLLS Experience

Organizational learning requires the active participation of the organization's members. MCLLS is a tool that Marines can use to participate in the learning process. The Marines interviewed, especially the commanding

officers, considered themselves experienced with submitting MCLLS reports, but inexperienced with retrieving lessons learned from the database. Submitting lessons learned as part of exercise after action reports is part of the organization's routine. Retrieving lessons learned from the MCLLS database is not.

I asked commanding officers and MCLLS managers to rate their personal level of experience submitting and retrieving lessons learned. The median and mode responses were 4. The data collected indicates that commanding officers are experienced with submitting lessons learned. Seven of eight commanders rated themselves as greater than moderately or very experienced with submitting MCLLS reports. The MCLLS managers are less experienced as a group. Five of ten MCLLS managers consider themselves as less than moderately or inexperienced with submitting MCLLS reports.

The data make intuitive sense. The high number of commanders with experience reflects the Marine Corps emphasis on after action reporting over the past few years. Following every major exercise, commanding officers must submit after action reports. Commanders are usually involved in reviewing and signing after action reports prior to the report being forwarded up the chain of command.

The experience levels of the interview subjects with retrieving lessons learned differed from the submission experience rating. The median response was 2 and the mode was 1. Eleven of the eighteen interviewed consider themselves less than moderately experienced or inexperienced. This coincides with the overall interview responses concerning retrieving lesson learned. The Marines interviewed explained thar retrieving lessons learned is

not a common occurrence. Therefore, individuals do not have the opportunity to gain experience using that aspect of MCLLS.

Seven of ten MCLLS managers believed that the procedures to retrieve a lesson learned from a database are not understood by most Marines in their unit. Only one manager claimed that many members of his organization could retrieve a lesson learned from the database. He said that twenty-five to thirty Marines in an organization of over 2500 Marines could access a lesson learned. All of those Marines work in S3 offices where after action reports are processed.

Between 1989 and August 1993, the Marine Corps entered over 8500 lessons learned into the "RAP" and "USMC" databases. In building the MCLLS databases, the Marine Corps acquired and stored many experiences from the Fleet Marine Force. Each lesson learned is a piece of Marine Corps history. Although, MCLLS has proved effective at promoting the acquisition and storage of lessons learned from exercises or operations, it has proved ineffective as a tool to encourage lessons learned outside of the narrow band of after action reporting.

b. Incentives to use MCLLS

MCLLS requires a the continual submission of new lessons learned to remain viable. An effective tool would provide multiple incentives to Marines to use MCLLS. Currently, the primary incentive is coercion. Marines submit MCLLS reports because they are ordered to do so. Commanders demand after action reports in MCLLS format following major exercises. One commander stated that without a means of enforcing compliance with the

regulations requiring after action reports, lessons learned would rarely be submitted. The threat of coercion maintains the flow of lessons learned today.

Several commanders indicated that MCLLS submissions are not as emphasized today as in recent memory. If the commanders lose faith in MCLLS ability to benefit their organization, I would expect the number of MCLLS submissions to decline. Reports reaching MCCDC have slowed. A more effective system would provide other incentives. The incentive could be as simple as the proverbial "pat on the back" from concerned parties. The strongest incentive would be for the individual user to reap a tangible benefit from using the system, such as learning how to better perform his job.

Creating, analyzing, and writing a lesson learned takes time. Interview responses and my personal observations indicate that time, in the Fleet Marine Force, is a precious commodity. One interview subject said, "What you have to remember is that MCLLS is not something that accomplishes the mission, and what do people work on first? That which accomplishes the mission." While one could argue that documenting lessons learned for future retrieval can help reduce tomorrow's management crisises, the benefit to the individual who has already learned the lesson may not be significant.

Writing a MCLLS report that is not mandated by higher headquarters is a luxury that few attempt. I compare MCLLS to another planning document that all Marines in positions of responsibility should have, a turnover folder. Given that frequent personnel turn-over is a part of the Marine Corps life, the purpose of a turnover folder is to maintain a consolidated reference document that explains the specifics of a how to

perform a job. The end user of the document, the person who will most benefit from it, will be the next Marine to hold the same position. My personal observation is that turnover folders are rarely done well. I believe the reason is that turnover folders, like optional MCLLS reports, are a luxury that benefits an individual's successor more than it benefits the individual writing the document. Unless commanders place additional incentives on turn-over folders or MCLLS reports to move them from the "nice to do" category to the "must do" category, other mandatory tasks, which are rewarded, will continually take precedence.

c. MCLLS Database Composition

One method to evaluate how the Marine Corps uses MCLLS is to study the data that have made it through the system and are included in the databases. I counted the frequency of occurrence for each of the fourteen MCLLS subject categories. The top six subjects in terms of frequency are the same for both the "RAP" and the "USMC" databases. Operations and Logistics lessons learned represent over sixty percent of total submissions in each database. This outcome is to be expected from an after action reporting system. Operations and logistics are the backbone of exercise planning and execution. The overwhelming majority of reports in the operations and logistics indicate that Marines working in these sections are the primary writers of MCLLS reports.

I make the assumption that learning occurs throughout the organization. An effective tool to promote organizational learning would have a more uniform distribution of lessons learned subjects. Six of the MCLLS subject categories stand out because of the extremely low number of

lesson learned. The subject categories are: doctrine, organization, training, education, equipment, and facilities/support. The total number of lessons learned in the previous subject categories comprised less than one percent of the total lessons learned in either database. Recall one of the stated objectives of MCLLS:

> • *to provide a responsive method for initiating action to correct deficiencies or shortfalls noted through the analysis of after action reports in the areas of doctrine, organization, training, education, and equipment.* (MCO 5000.17, 5 March 1990)

The information in the MCLLS databases reveal that Marines are not writing the type of MCLLS reports that would lead to change in one of the primary objectives areas of MCLLS. MCLLS effectiveness is limited to a narrow range, after action reporting.

A learning organization continually seeks change in search of continuous self improvement. Kramlinger defines a learning organization as a body of aligned individuals (such as the Marine Corps) whose members at all levels spontaneously learn and innovate in ways that promote the well being and accomplishment of the organizational mission (Kramlinger, p. 48). Organizational change and adaptation are a fundamental part of a learning organization. Training plays a principal role in coordinating the actions of organizational members toward common goals. Of the more than 8000 lessons learned in the databases, none are in the organization or training subject categories.

2. Is MCLLS Part of the Organizational Routine?

March defines organizational routines as a generic term that includes the forms, rules, procedures, conventions, strategies, and technologies around which organizations are constructed and through which they operate (March, 1988, p. 320). MCLLS has been incorporated into the Marine Corps organizational routine as an after action reporting system. In this section, I discuss MCLLS stated purpose, its introduction and its use throughout the Marine Corps.

a. A Common Understanding of MCLLS' Purpose

To be an effective system MCLLS users should have a common understanding of its purpose and role in the organization. My research found that a common consensus exists among commanding officers, indicating a level of effectiveness. However, the consensus focused on a specific aspect, learning from the others' mistakes. I argue that a higher level of effectiveness could be reached by incorporating and emphasizing learning from success in addition to learning from mistakes.

Since commanding officers play a central role in making MCLLS effective, one of the first questions I asked commanders addressed their interpretation of the purpose of MCLLS. All eight commanders responded with similar answers. Six of the eight commanders specifically identified MCLLS as a tool to help Marines avoid the same mistakes others have made in the past. Only two of the commanders discussed learning from the positive experiences of other organizations.

A colloquialism misused by multiple Marines interviewed during this research effort is "re-inventing the wheel." Re-inventing the wheel

implies repeating the actions of others, while learning from others' mistakes is self explanatory. All too often, the phrases "learning from others' mistakes" and "to prevent re-inventing the wheel" are used interchangeably. My perception from the data collected and from my personal observation is that many Marines consider MCLLS a tool to be used primarily to learn from others' mistakes. This attitude restricts MCLLS from the broader spectrum of learning from positive experiences, the success of others, in addition to learning from their mistakes.

The restrictive learning attitude begins with the Marine Corps MCLLS Order. When I compared the Marine Corps Order to the Joint Chiefs of Staff JULLS Order, I noticed an interesting difference. The JULLS order *describes a lesson learned as a statement of positive action taken to generate success, or a statement of action that should have been taken to avoid or alleviate the problem* (Joint Pub 1-03.30, p. II-5). The order breaks down a lesson learned into two parts, how to succeed or how to work around a problem. The aim is to provide useful information that other commanders can use

The Marine Corps MCLLS Order *defines a lesson learned as procedures developed to "work around" deficiencies in doctrine, organization, training and education, and equipment* (MCO 5000.17, 5 March 1990). The Marine definition focuses on only one side of learning, overcoming deficiencies, and does not address learning from successes. On a positive note, the MCLLS order does address the potential lessons learned during the day-to-day operation of a unit, an exercise after action report is not a prerequisite for a

MCLLS report. JULLS is solely for after action reporting of joint chiefs of staff (JCS) sponsored exercises.

b. MCLLS Introduction into the Fleet Marine Force

The introduction of the compact disc version MCLLS did not go smoothly. The Marine Corps experienced problems getting the hardware and software into the hands of the right people. When first introduced, Fleet Marine Force units received the compact disc hardware many months before the software was ready for distribution. The disjointed fielding effort handicapped MCLLS incorporation into the organizational routine. Some units aboard Camp Pendleton still do not have either the hardware, software, or the trained personnel to operate the system.

While the Marines interviewed aboard Camp Pendleton indicate that progress has been made, several units still do not have a functional Marine Corps Lessons Learned System. One command in the aviation group had neither the hardware nor the software. One of the ten MCLLS managers interviewed had the software on hand but the compact disc reader remained in the supply section. In fact, the supply section even had the advanced capability to write data onto compact discs, yet the MCLLS manager lacked the necessary hardware. The MCLLS manager had recognized the problem and requested a compact disc reader in an upcoming data processing equipment funding request. Another unit had the compact disc reader and the MCLLS software, but lacked the necessary cables to link the compact disc reader to their computer.

The compact disc readers purchased by MCCDC for MCLLS frequently became the first compact disc player in an organization. Concurrent

with the distribution of the compact disc readers, many Marine units acquired compact discs containing supply and maintenance data from Defense Logistic Agency (DLA) sources. DLA distributed compact discs but individual units had to acquire a compact disc player with their own funds. Without the MCLLS software the operation sections had no use for a compact disc player. Thus compact disc players purchased by MCCDC specifically to operate MCLLS, ended up in the supply and maintenance sections.

When the MCLLS software arrived, the compact disc reader often remained in the logistics sections. My observations indicate that the compact disc readers are used repeatedly each day in the supply and maintenance sections to research spare parts and supply stock numbers. Using the compact disc players for logistical research makes good management sense. In the operations sections, MCLLS is used infrequently, perhaps once a month. Individual commands used the equipment in the location that could most benefit the organization. Units received real benefits from the logistical research. MCLLS offered only potential benefits.

3. Do Marines Throughout the Organization Have Access to MCLLS?

Huber writes that to demonstrate organizational learning, that which is stored in the organizational memory must be then brought forth from memory (Huber, p. 106). Limited access to MCLLS is an obstacle that hinders MCLLS' effectiveness. Access is a difficult topic to measure. In response to my interview question regarding access to the MCLLS databases by Marines outside of the S3/G3 offices, over half the interview subjects believe that access exists. I asked follow-up questions to examine any limitations to the perceived

open access. Four of the seven managers who stated there is open access later admitted that a lack of awareness or knowledge of MCLLS and its capabilities limited access. Those who first answered that access is limited offered similar reasons.

My personal observations indicate that access to MCLLS is limited by cultural and organizational barriers. Each unit receives a single copy of the MCLLS compact disc. It is kept in the operations section. The Marine Corps, being a very structured organization, divides organizational functions into distinct categories. For example the S3 shop handles operations and training and the S4 shop manages logistic support. Rarely will the S3 officer get involved in logistic support or the S4 officer in operations and training. Given that scenario it would be unusual for a Marine from the S4 office or another section to enter the S3 office to use their computer to search a MCLLS database without an invitation from the S3 officer.

The S3 has staff cognizance over MCLLS. After action reporting in common Marine Corps terminology is a "S3 function." In theory, if the S4 wanted something off the MCLLS database he could have a clerk in the S3 section search the database for him. While this method of conducting business may be efficient in terms of task specialization, it implies two assumptions. First, that the S3 clerk who would search the database would be proficient in operating the system. The second assumption, and a large one, that the individual searching for information knows what he is looking for. MCLLS would be a more effective tool with increased hands on access to the system. Searching the databases for useful information requires experimentation with

different keywords and other categories. It is best done by the person seeking the information.

The distribution of MCLLS authors demonstrates limited access to MCLLS. The distribution is heavily weighted toward field grade officers. This makes sense given that MCLLS is primarily an after action reporting system Field grade officers are more likely than more junior Marines to write after action reports. However, if MCLLS were an effective tool to method of code organizational memories, I would expect to find a more uniform distribution of authors. The low number of junior officers and the absence of MCLLS submissions from enlisted Marines in my random sample indicates many Marines have limited or no access to the system.

4. Is MCLLS Easy of Use?

An effective tool is easy to use. Ease of use can encourage Marines to operate the system and to explore its potential. Recent changes in the MCLLS software have significantly improved ease of use and the effectiveness of the system.

My initial background interviews indicated that some Marines consider submitting a MCLLS report in the proper format to be a difficult and time consuming task. I found this perception is not shared by Marines in the Fleet Marine Force. I believe the difference in perceptions is due to the introduction of the MCLLS Instructional Input Program (MIIPS). Marines interviewed for background information had transferred from Fleet Marine Force units before MIIPS became widely distributed. Today, MIIPS is readily

available. Anyone who has access to the Camp Pendleton base local area network can download the file.

MIIPS is a relatively simple program to execute. It ensures that the MCLLS author writes the report in the proper format. It also includes a companion spell checker program. A few MCLLS managers did discuss difficulties with the MCLLS format, but their discussion focused on their lack of training, not the system's format.

The introduction of the MCLLS software Version 4.0 in the Fall of 1993 introduced a Windows type operating environment to the system. Searching and retrieving lessons learned is significantly easier. The MCLLS instructors were able to cut the basic training class in half, to one day. A reduction in training time and improved ease of use will encourage more Marines to learn and operate the system, making it more effective.

5. Have Marines Received MCLLS Training?

I asked the commanders and the MCLLS managers two questions about their personal computer literacy and the computer literacy of those in their immediate office. The responses to both questions evaluated overall computer literacy as moderate. Computer education and training in the Fleet Marine Force is sporadic. Camp Pendleton does have a computer training facility but the constant turnover of personnel is a persistent problem. On the job training is the primary method to teach Marines to operate a computer system. All too often, a Marine's computer skills are limited to using a word processing program. The MCLLS office recognized the problem of operator

training and implemented a mobile training team program to allow the MCLLS experts from Quantico to share their knowledge with the system.

An effective tool to promote organizational learning would incorporate training at multiple levels of the organization. Training enables the tool to be used effectively. MCLLS training has focused at the computer operator level. Little effort has been made to incorporate MCLLS managers or Commanding Officers into a training syllabus. The operator training is effective, but once the Marines return to their offices, they are not likely to use MCLLS frequently. Without regular practice, the trained operators to lose their skills. I found no evidence of supervisor level training in the Fleet Marine Force units. Several commanders and MCLLS managers had attended a MCLLS class while students in Quantico, but the classes taught the same subject matter as the operators class. None who mentioned this training considered it worthwhile.

I briefly attended a training class aboard Camp Pendleton. Two instructors from MCCDC taught the class. The class began with the basics of how to turn on a computer. By the end of the day, the students could prepare lessons learned for submission and retrieve lessons learned from a database. All who had Marines attend a training class considered the training to be beneficial.

6. Is MCLLS Cost Effective?

An effective tool should be cost effective. I asked the sixteen Marines to evaluate the cost effectiveness of MCLLS in terms of their time invested to submit lessons learned. Responses to this question were varied. One Marine

considered MCLLS to be worth every penny and another considered it to be a waste of money. The remaining responses were between the two extremes. Any analysis of cost effectiveness has two variables, the cost and the benefit. The responses indicate that while MCLLS imposes little cost on an organization, it also provides little benefit. Some considered a low cost and low benefit system to be a cost effective use of resources.

The response to a question concerning the cost effectiveness of retrieving lessons learned was not as positive. Ten of fourteen interviewed considered it to be a waste of money or less than neutral. This is more evidence that Marines are not using MCLLS to retrieve lessons learned and to benefit from them. Not surprisingly, the three who rate MCLLS as greater than neutral in terms of cost effectiveness also used the system regularly.

7. Are Marines Satisfied with MCLLS?

Overall, my research results indicate that few are satisfied with MCLLS. MCLLS requires command resources to operate yet has provided few benefits. In response to a question on MCLLS impact on their unit, eleven of eighteen Marines considered MCLLS to have a less than moderately beneficial impact. The median and mode responses were 2. With or without MCLLS, commanders would demand after action reports. MCLLS makes those reports available to a wider audience. One commander accurately expressed a common frustration. He said, "Right now we could go back to the old methods of doing business without much being changed. MCLLS is just a computerized after action report." On the other hand several commanders believe that the Marine Corps is on the verge of having a good system.

I asked the commanders to place a value on MCLLS by asking whether they would purchase MCLLS with their own organizational funds and if so how much would they be willing to pay. Only three of the eight commanders would spend their own limited funds to purchase MCLLS. One commander was willing to pay whatever it takes to acquire the software, while the other two would not spend more than $500. Although most commanding officers interviewed do not place a high value on MCLLS, one commander made a insightful comment. He said, "Even if a lesson learned does not get out of this battalion, it is worthwhile, because someone has learned something by going through the process of putting thoughts on paper."

C. ORGANIZATIONAL LEARNING?

1. Does MCLLS Encourage an Open Exchange of Information?

a. Communication medium

Huber considers information interpretation and distribution to be central to organizational learning. MCLLS demonstrates a new method of sharing information for the Marine Corps. It is a new and unfamiliar communications medium on two levels. First, MCLLS is an computer information system. Second, MCLLS enables Marines to share information across organizational boundaries.

MCLLS is the first database management system to be distributed by the Marine Corps for widespread use. Recall, MCCDC funded the initial procurement of the MCLLS hardware and software. A continuing obstacle is the lack of computer equipment, particularly at the lower organizational layers

where most Marines work. The use of a computer system to share information requires changes in organizational practices. The number of personal computer systems in the Marine Corps remains limited. The ability to write and retrieve reports from a computer system in an organization that has not widely disseminated computer systems naturally limits the capability of MCLLS.

Before MCLLS, Marines submitted after action reports but after the initial review by select individuals within the chain of command, the reports were banished to file cabinets until destroyed. Similarly, local lessons learned were incorporated in turnover folders and desktop procedure files. Such documents rarely left the office in which they were created. MCLLS offers a dramatic increase in the ability to communicate and exchange information. As a new method of communication, it must be assimilated into the organizational routine.

As a new technology MCLLS has experienced growing pains. Writing MCLLS reports, especially with MIIPS, is similar to typing after action reports on a word processor. It is not a large leap in organizational practice. However, retrieving lessons learned is an enti· · new method of conducting business. A MCLLS user must understand data se management techniques to access and search a database for information. This process is a large evolutionary change in offices where computers are most frequently used as word processors.

In spite of its drawbacks as a new method of communication, MC· · is an effective tool to promote organizational learning. MCLLS demonstrates a significant leap in the Marine Corps' ability to share

information throughout the Marine Corps. As computers appear and Marines become more familiar with their operation, MCLLS should become more effective.

b. Defensive Routines

Organizational learning requires open and accurate communication of lessons learned. The chain of command may present a problem to open communication. Some individuals may resist telling their boss that a problem exists. Honest appraisal of unit performance is difficult, especially in a public setting. One commander said, "Everyone is more than willing and very quick to point out deficiencies and shortfalls in those things that they cannot control or influence. They are very hesitant to point out anything that they had under their control but failed to do or did poorly." Six of eight commanders believe that "saving face" plays a role in the lessons learned process. Some attributed it the Marine tradition of never failing, others consider it a part of human nature: no one wants to look bad. Argyris defines such actions as defensive routines. The organization builds barriers that prevent embarrassment and preserve the status quo. Defensive routines are anti-learning and counter productive.

During a background interview, an officer described a personal experience with the power of "No." He stated that he tried to submit a MCLLS report about a serious problem with fuel availability during an amphibious operation. The unit lacked the proper type of fuel to power the generators that start the unit's aircraft. In an aviation unit, that should be the type of lesson that gets people's attention. Unfortunately, he next higher headquarters rejected the report. They informed the MCLLS report author that the

command had learned that lesson two years prior and since they already learned the lesson they did not want to forward the report and look bad. This particular lesson learned addressed a problem faced by every Marine unit that deploys aboard Navy amphibious shipping, storing gasoline aboard ship is restricted because of the fire hazard. Yet one commander denied the analysts at MCCDC and future deploying units an opportunity to benefit from an embarrassing experience.

Six of the eight commanders did support the proposal aimed at reducing the influence of multiple layers in the chain of command with one restriction. I asked if a MCLLS report should be allowed to be sent directly to MCCDC with a battalion commanders signature rather than sending it through the chain of command layers. One senior officer who disagreed with the proposal felt that battalion commanders lack the broad based experience to make the determination of what should be forwarded to MCCDC. Though an isolated opinion, the attitude is cause for concern. When a senior officer considers experienced battalion commanders to be incapable of evaluating lessons learned, I would expect the organization to have difficulty acquiring, interpreting and disseminating information.

c. Command screening

Commanding officers play a central role in an organization interpreting and distributing information. Currently, Marines must submit MCLLS reports via their chain of command. At each level, the reviewing officer has the opportunity to reject, modify, or forward the report to the next level. Typically MCLLS reports flow through the organizations Operations/Training sections (S3/G3). Multiple staff officers may also have the

opportunity to review and provide the decision maker input prior to taking action on a MCLLS report. One commander recognized that his own review of MCLLS reports could discourage his subordinates from submitting lessons learned. He refrained from even reading the MCLLS report until after it had been forwarded to the next level in the chain of command.

The commander's screening process begins with defining what is a lesson learned. My research data indicates some confusion exists about what is a lesson learned. This confusion leads to different levels of screening as a report goes up the chain of command. Under current practices, each commanding officer and officer in the review chain of command may interpret the MCLLS order differently. Commanders interviewed described two common decisions points in their screening process. First, they must decide whether a lesson learned is an internal issue and should not be forwarded. Second, they often evaluate whether the lesson learned has Marine Corps wide significance. Each commander may have a different interpretation of these questions.

Sharing information begins with the decision of what to share. I found that commanders have differing perspectives on what type of lesson learned belongs in MCLLS. At one extreme is the belief that anytime the most junior Marine in an organization learns something new, it should be disseminated throughout the Marine Corps. At the other end of the scale, some commanders demand a MCLLS report to have, in their opinion, obvious Marine Corps wide significance before forwarding the report up the chain. The optimal solution is probably somewhere in between. At each organizational level, the opportunity to reject the lesson learned exists.

Even Marines interviewed at MCCDC interpreted the order differently. Some said that every report has value and should be forwarded for inclusion in the database. Others expressed a concern about flooding the database with marginally beneficial information. I support the first view that every report has value. One commander explained that on one occasion he combined three similar MCLLS reports into a single consolidated report as an attempt at efficiency. I view that as a loss of valuable information.

Five of eight commanders interviewed considered there to be no obstacles that could hinder submitting lessons learned via the chain of command. The remaining three commanders described several obstacles; administrative burdens, lack of training, and a natural filtering process. I believe that several of the commanders look at the filtering process as a benefit rather than a drawback. They have a point. The review process at its best could help the MCLLS authors to make their arguments stronger.

The importance of the chain of command is ingrained in Marine Corps culture. One commander called the chain of command "sacred." Not surprisingly, this commander did not support a proposal to allow Marines to submit lessons learned directly to MCCDC. His personal experiences validate the need for a commander to screen items forwarded up the chain for content, format, and presentation. He emphasized the difference between editing a report to improve the presentation of its content and censoring the information. He believed that Marines and Sailors welcome the opportunity to better get their point across.

I am wary of the chain of command's ability to inhibit change. Anywhere along the chain if a commander or a direct supervisor says, "No,"

the submission process effectively ends. While methods exist to challenge any decision made by a superior in the chain of command, challenging authority is not rewarded in the Marine Corps. Commanders who seek to maintain a flow of information from the lower levels of the Marine Corps must take extra efforts to overcome the bureaucratic resistance to anything that challenges the status quo.

d. Feedback

Feedback is vital in a learning organization. Without feedback learning will cease. Individuals will ask themselves if submitting a lesson learned is worth the effort. Marines who do not receive positive feedback from attempts to retrieve lessons learned will cease trying to search the database. Numerous Marines interviewed described MCLLS as a "black hole" of information, where much goes in but little comes out. An effective tool to promote organizational learning would provide positive feedback at every opportunity. Failure to do so will result in sub optimal system performance.

I examined the feedback given by MCCDC to the MCLLS authors. Systematically, only one in eight lessons learned receives a response to the issue raised. The MCLLS office in Quantico does provide acknowledgment of receipt of a MCLLS item but only those selected for the Remedial Action Program feedback. The RAP Steering Committee includes their comments in paragraph nine of the lesson learned. The author may view the response when MCCDC distributes the next updated version of the MCLLS compact disc. I examined the content and the tone of the responses found in the RAP database.

I coded the content information contained in the headquarters response to the lesson learned into three categories, Pro forma, Tailored, and Acknowledgment. Pro forma responses are categorized by bureaucratic responses that cloak the response in organizational policies, procedures or regulations but take no action. Forty-five percent of the headquarters response to a lesson learned fall are Pro forma. Tailored and Acknowledgment responses provide detailed feedback to the MCLLS author. Together, they comprise another forty-five percent of the responses. Additionally, ten percent of lessons learned in my sample failed to include any feedback from the RAP pr ss. To encourage organizational learning, the number of Pro Forma responses should be replaced with action oriented Tailored responses.

I coded the tone of the Remedial Action Program responses. My categories are Positive, Neutral, Negative, and No Comment. The majority of responses have a positive tone. Slightly under thirty percent of the responses have a neutral tone. This corresponds with the pro forma content discussed earlier. Again ten percent contained no comments. The significant finding in this area was the number of responses that are negative. Some of the negative responses criticize the professional skills of the author. One extreme example stated, "Any good supply officer at the MEF level would be aware of this." Such responses suppress learning. Positive feedback will promote organizational learning. Negative feedback builds obstacles to learning. In addition to criticizing the MCLLS author, negative responses could have a side effect of suppressing the desire of other indivduals to submit their ideas.

2. **Does Information Retrieved From MCLLS Lead to Changes in Organizational Practices?**

a. Job performance

I asked eighteen interview subjects if MCLLS had enabled them to better perform their job. Ten believed it had. Seven of the ten stated that it allowed them to plan more effectively. Other responses addressed included improving customer service, confirming ideas or concepts, and encouraging the documentation and analysis of operational lessons. What my interview question failed to address is the frequency of these benefits.

From my observations, the benefits came infrequently and at irregular intervals. This observation was confirmed by the responses to a question asking if MCLLS had impacted the interview subjects methods of conducting business. Twelve of seventeen interviewed believed it had not. Even the five who believed MCLLS had changed their methods of business did not offer strong arguments. Their explanations indicated that MCLLS may have led to a few changes but had not made any significant changes in the day-to-day operation of an organization. This supports the argument that although single loop learning may occur on occasion, no evidence of double loop learning exists.

b. Promoting learning

I asked the commanding officers to rate the impact of MCLLS on promoting learning throughout the Marine Corps. Only one commander strongly believed that MCLLS has positively impacted the Marine Corps. I asked the commanders to rate MCLLS impact on their own unit. Eleven of the

eighteen responses were either less than moderately beneficial or least beneficial. No response indicated MCLLS was very beneficial to their unit.

My observations indicate this response relates to several factors starting with the frequency of use. Since MCLLS is perceived by many to be only an after action reporting method, the only time it is regularly used is before or after a major exercise. Often the unit conducting the exercise has a satisfactory pool of experience to draw from within the organization. Thus MCLLS is not in high demand. Alternately, when a unique situation such as Operation Restore Hope in Somalia suddenly appears, everyone wants to get their hands on as much information as possible. MCLLS, if used solely to access after action reports, is merely a planning tool with limited applications. It has the potential to promote more learning that it currently does.

c. Local MCLLS applications

MCLLS has the built in capability to allow users to create and maintain local unit database files. Such files could contain any type of information. One possibility would be lessons learned reports that a commander does not want to forward up the chain of command. I asked sixteen interview subjects if they maintain automated records of lessons learned or after action reports in their commands. Ten of sixteen responded yes, but I believe they responded to only the first part of the interview question. The question I asked contained three parts; 1)Does your unit store command unique lessons learned or after action reports, 2) that are not forwarded up the chain of command, 3) in a computer database management system? When I asked a follow up question, "What type of software do you use?" Five responded MCLLS, two stored word processing files on floppy

disks, and three maintained paper records. Only five of sixteen actually maintain databases of lessons learned.

My personal observation is that the Marine units who do maintain database local records do not store that data efficiently. Each organization that maintained database records lacked easy access to the files. The computer files lacked any organization. The MCLLS managers I observed could not identify the contents of the databases. The methods of storing data files resembled a file cabinet with paper records in random order. The organizations I visited, in addition to my own experiences as a battalion information systems office, indicate that Marines have a difficult time maintaining and managing any information stored on computer disks.

This problem is amplified by the five character limit plus a three character file extension name for most MSDOS filenames. The result is a plethora of five character codes on a floppy disk that can only be understood by select individuals. MCLLS filenames are also limited to five characters. Computer disks, hard and floppy, quickly fill with what becomes a jumble of semi-intelligible codes. Unless an organization member knows the coding scheme, accessing the data becomes difficult. This problem is compounded when various forms of the data, different versions or back up files with similar filenames, or data is stored in multiple folders or disks.

I asked the six Marines who said they did not use a database system to store local lessons learned if they would be interested in acquiring such a capability. Five of the six expressed interest and the remaining individual was not sure. Three did express concern over the lack of computer equipment and training in the Marine Corps. Storing data on a computer without the

widespread ability to access the information would be counter-productive. Generally, the number of computers below the battalion organizational level in the Marine Corps today is limited. A typical company in a ground combat or combat support unit may have one stand alone computer. Current plans aboard Camp Pendleton do not include linking company offices to the base wide area network.

d. Demonstrated benefits

MCLLS has had an effect on the margins. During the interviews multiple Marines explained that MCLLS helped them plan operations. Only one interview subject could describe a specific example learning attributed to MCLLS. This example came from a Navy officer in a Medical Battalion. Medical battalion personnel matched Desert Storm lessons learned found in the MCLLS database with their own professional experience to identify a requirement for a medium term trauma kit. The current trauma kits carried by corpsman do not contain the necessary life saving equipment to care for a patient for the extended periods that it could take to get a patient evacuated to a medical facility.

The Medical Battalion sailors created a kit to fill the needed identified with MCLLS assistance. They tested the trauma kit in Somalia with positive results. They are attempting to get the Marine Corps to standardize the trauma kit throughout the world. In addition to modifying equipment to meet the needs of Marines in the field, this lesson learned could save lives. This is a good example of single-loop learning. The sailors identified a weakness in organizational procedures and equipment and took corrective action.

e. Remedial Action Program

The Remedial Action Program systematically review MCLLS reports to evaluate potential changes in organizational practices. The Remedial Action Working Group classifies each lesson learned accepted into the remedial action program. The three categories are Noted, Procedural, and Remedial Action. For most reports categorized as Noted items, MCCDC was in the process of taking corrective action prior to receiving the MCLLS report. Procedural lessons learned can be corrected with current organizational practices. Noted and Procedural items require no action after the RAP evaluation. Remedial action items require action. Once identified, RAP items enter the Marine Corps' combat development process for corrective action.

At first the overwhelming number of Noted items, ninety percent, surprised me. My initial impression was that MCLLS submissions must have little value since the Marine Corps had already taken action to resolve the problem. I questioned submitting a MCLLS report since ninety percent of the time the Marine Corps may have already addressed the issue. But when I looked at the number of Noted submissions from a different perspective, I recognized that it is an example that the system is working. Marines are informing higher headquarters that real problems exist in the fleet. MCLLS in this scenario validates work in progress at MCCDC, MARCORSYSCOM, and HQMC.

The small number of lessons learned classified as Remedial Action items reflects a thorough combat development process. In that process MCLLS is one of many sources of input. Remedial Action items are, in essence, newly identified problems or issues that have not be incorporated into the combat

development process. MCLLS has proved effective at identifying subjects for possible organizational change.

D. CONCLUSION

The data demonstrates that MCLLS is an effective tool to promote organizational learning but it could be more effective. MCLLS is a tremendous improvement over previous methods of learning from prior experiences. MCLLS provides a tool to encode, store, and distribute lessons learned throughout the Marine Corps. Marines do use MCLLS, although it is not used frequently.

Today, MCLLS is used primarily as an after action reporting system. It has greater potential. Currently, the MCLLS databases contain slightly more than 8500 lessons learned. Imagine the size of the databases if each Marine wrote one lesson that he/she learned each year. Over the same five year time period, the database would contain over one million lessons learned. To reach that level of input, Marines must have access to the system and document their learning experiences. This requires moving beyond using MCLLS solely as an after action reporting system.

Access is the greatest problem restricting MCLLS effectiveness. As an after action reporting system, it is maintained in the operations sections of unit headquarters. Most Marine do not have ready access to MCLLS. Without access, few have developed the skills necessary to operate the system. Marines are not familiar with the benefits that MCLLS can offer. Recent modifications to the MCLLS software made the system more user friendly and should increase accessibility.

MCLLS demonstrates a new method of communication for Marines. The use of information technology offers fresh opportunities to lower the cost of coding, storing and distributing information. The power of this technology is limited by the low number of computer systems at the lower organizations. As a new method of communicating, MCLLS faces several problems imposed by the chain of command. A MCLLS report must overcome the command screening process and the organizational defensive routines that can prevent a lesson from reaching MCCDC.

Organizational learning has occurred at the lower end of the learning continuum. Marines have identified lessons that are potentially useful to the organization and encoded them into the organizational memory. Some evidence exists of single-loop learning, but I consider that the exception rather than the norm. No evidence of double-loop learning has been discovered. The Marine Corps emphasized submitting MCLLS reports to build the MCLLS databases. The Marine Corps has not been effective in encouraging Fleet Marine Force Marines to learn from the information in the MCLLS databases.

VI. SUMMARY & RECOMMENDATIONS

A. BACKGROUND

The Marine Corps Lessons Learned System provides Marines with the capability to document, process, store, and disseminate lessons learned through experience. MCLLS is an IBM-compatible database management system that is available to all Marine organizations. The MCLLS software can be found in most operations sections in battalion size and larger units.

MCLLS is a centrally managed information system. Lessons learned in the Fleet Marine Force and the supporting establishment must travel up the chain of command before reaching the database managers at the Marine Corps Combat Development Command (MCCDC). A Marine Corps regulation requires the submission of MCLLS reports after major exercises and other significant events identified in the order. Individual Marines may also submit a MCLLS report if they document a lesson learned that is not related to a command sponsored exercise. As a report moves through the chain of command, at each level of the review process, it may be rejected, modified or approved and forwarded. The MCCDC database managers include all reports they receive in either the remedial action program or information databases. MCCDC distributes an updated compact disc semiannually to MCLLS users throughout the world.

The underlying objective of MCLLS is to enable Marines to learn from the past experiences of other Marines. In this thesis I describe three levels of organizational learning in a continuum of learning. At the low end of the learning continuum, Huber describes organizational learning as a process of

acquiring potentially useful knowledge for future reference. Argyris and Schon's definitions of organizational learning demand action to identify and correct errors. They describe two levels of learning, single-loop and double-loop, which I categorized as moderate and high levels in my continuum of learning. Single-loop learning corrects errors without modifying organizational policies, norms, and procedures. Double-loop learning leads to a pervasive modification of an organizational norms, policies, or objectives.

B. RESEARCH METHODOLOGY

The primary research question of this thesis investigates the effectiveness of MCLLS as a tool to promote organizational learning in the Fleet Marine Force. I began my research effort by learning how to operated the MCLLS software. I taught myself how to operate the system with minimal difficulties. I found the most recent version of the software to be significantly easier to operate than previous editions.

I collected the bulk of the data for this thesis from personnel interviews. I spent four days aboard Camp Pendleton, California interviewing commanding officers and Marines who manage MCLLS in their units. I interviewed Marines from command elements, division, wing, and combat service support units. I recorded each interview and later transcribed the tapes. To better manage the large volume of data, I created a coding scheme to reduce the data into a more manageable format.

I also searched the MCLLS databases for answers to my research questions. Because only the Remedial Action Program database contains feedback comments from MCCDC, I selected a random sample of one hundred lessons learned from that database and coded the reports for their report classification, author, and the content and tone of the headquarters response. I conducted

background searches on both databases to gain an understanding of the type of reports that are in each of the databases.

Prior to this research effort, no method to evaluate the effectiveness of MCLLS existed. To answer the research question, I divided it into two parts and established criteria for each. I examined the following criteria for MCLLS as an effective tool to promote organizational learning: MCLLS usage by Marines, access, incorporation into the organizational routine, ease of use, training, cost effectiveness, and user satisfaction. I also evaluated the outcome of the process, organizational learning, by addressing the following criteria: MCLLS encouraging an open exchange of information, and any changes in organizational practices.

C. RESEARCH RESULTS AND RECOMMENDATIONS

I examined MCLLS effectiveness as a tool and MCLLS effect on organizational learning. Although the data demonstrates that MCLLS is an effective tool to promote organizational learning, it could be a more effective tool. MCLLS has resulted in low levels of organizational learning. Marines write reports that they believe have the potential to benefit other organizations. MCLLS has led to several minor changes in Marine Corps policies and procedures which indicates occasional single-loop learning. In no way has MCLLS led to any pervasive changes in organizational practices that would support the definition of double loop-learning.

1. Developing a Common Understanding

Marines have differing perceptions of what entails a lesson learned. Some argue that every lesson learned has value and should be recorded. Others define a lesson learned more narrowly and base their definition on

their personal opinion of what has relevance for Marine Corps wide distribution. The end result is differing levels of screening all along the chain of command, beginning with the author's.

The Marine Corps MCLLS order emphasizes learning from the mistakes of others. Many Marines associate MCLLS only with learning from others mistakes. This limits MCLLS effectiveness. I recommend an increased emphasis be placed on learning from the successes of others in addition to learning from the mistakes of others. The Marine Corps should clarify what it expects from MCLLS. Senior officers should take steps to communicate a common understanding of MCLLS to all Marines. Commanding officers at all levels should take similar steps to disseminate a common understanding within their commands.

2. Types of MCLLS Reports

Today, Marines use MCLLS primarily as a major exercise after action reporting system. Since major exercises occur infrequently, perhaps twice a year, MCLLS is used infrequently. Following a major exercise, there may be a strong emphasis from higher headquarters to submit MCLLS reports but after the reports are submitted MCLLS becomes a low priority until the next exercise looms. Consequently the databases contain lessons learned from major exercises. Marines planning for the next major exercise (S3/G3 section personnel) may access the database but for most members of the organization the information has little value. Field grade officers write the majority of MCLLS reports. Field grade officers, planning for major exercises, benefit most from the system today.

I recommended that the Marine Corps place additional emphasis on making MCLLS a viable tool for a broader audience. Field grade officers are a

small minority in the Marine Corps. Less experienced officers and enlisted Marines have the most to learn, yet currently reap few benefits from MCLLS. One method to increase par :ipation from the junior ranks would be to emphasize recording lessons learned from routine daily experiences rather than infrequent major exercises.

3. Improved Physical Access to MCLLS Software

A major problem facing MCLLS is the lack of access. MCLLS is managed by Marines in the operations sections. Marines who do not work in that staff section typically do not use MCLLS. Without ready access, few have developed the skills to operate the system and explore its capabilities. The recent improvement in user friendliness should encourage more Marines to learn how the system works.

Broadening access to the MCLLS software has the potential to result in immediate improvement in organizational learning. The Marine Corps is currently evaluating several options that would increase access. MCLLS officials hope to take advantage of the growing number and size of local area networks by placing the MCLLS databases on the network. This change would enable any Marine with access to a local area network to have MCLLS on his desk. The number of potential users would increase dramatically.

Unfortunately, few units below the battalion level have access to the base local area network. Fiscal constraints have restricted any plans to broaden the local area network to include all computers aboard the base. The potential benefits of MCLLS and its successor systems may help establish a requirement to link the computers at all organizational levels to local area networks. I strongly encourage MCLLS decision makers to aggressively pursue any option

that broadens access to the system. Access at the lower organizational levels should have a high priority.

4. Education and Training

Using a computer information system to document, store and retrieve organizational experiences, and sharing those experiences across organizational boundaries are new methods of conducting business for Marine organizations. The commanding officers and MCLLS managers interviewed rated improved education and training as the most frequent suggestion to improve MCLLS. Many consider MCLLS potential to be limited by a lack of awareness of the system and its capabilities. Promoting awareness coincides with the need to broaden access. The current training package teaches primarily junior Marines how to operate MCLLS. It appears successful in that goal.

In conjunction with such efforts, I recommend additional instruction for those who will supervise the MCLLS operators. A simple solution would be to conduct command briefs whenever operators classes are taught. The MCLLS instructors should also meet with the senior MCLLS managers in the organization visited to discuss current issues and methods to encourage use of MCLLS.

Without addressing the need to educate multiple levels in an organization, the operator training cannot achieve optimal results. When MCLLS managers and their peers do not see the need to use MCLLS, then the operators will not use the system. Teaching supervisors how to operate the system is not enough. Supervisor level training should address the analysis of the databases and how they can benefit from the system.

5. **Minimize Command Screening**

All MCLLS reports flow through the chain of command. The command screening process influences the type and content of reports that are submitted. Lesson learned and documented may be lost when the MCLLS reports flow through multiple levels of command screening.

A learning organization recognizes the power that can be harnessed when individuals at all levels of the organization commit themselves to continuous improvement of the organization. Senge writes, "The organizations that will truly excel in the future will be the organizations that discover how to tap people's commitment and capacity to learn at all levels of the organization." (Senge, 1990, p. 4) Minimizing the command filtering process would reduce the obstacles that inhibit the open exchange of information.

I recommend the Marine Corps reduce the command screening process by allowing direct submissions to MCCDC from the battalion organizational level. The battalion commander may screen the reports for style, format, and presentation to ensure the lesson learned is identified and communicated in a professional manner. Commanders should forward all lessons learned to MCCDC. With a common understanding of MCLLS, I do not consider this level of command screening to be overly restrictive. Concerns that higher headquarters be left out of the process could be alleviated by the battalions simultaneously sending copies of the report to their senior headquarters.

Each lesson learned has value. Through the command screening process MCLLS submissions may be filtered for any number of reasons. Every time a decision is made not to forward a lesson learned, knowledge available to the Marine Corps is lost. One commander described taking four similar

reports and combining them into one consolidated report to improve efficiency. As an analyst, I would prefer to see the data in its raw form. Imagine an analyst at MCCDC finding a single MCLLS report while researching a specific problem. Compare that example with one where the analyst finds multiple reports addressing the same problem. In simplest terms, the multiple reports would indicate the problem is more widespread, potentially provide more detailed data, and hopefully initiate a closer examination of the issues. Minimizing command screening should result in more valuable data reaching MCCDC.

6. **Remedial Action Program Feedback**

I recommend the Remedial Action Steering Committee review all responses to MCLLS reports for tone and content. Each response should be tailored to the individual who wrote the lessons learned report. Bureaucratic jargon and excuses for inaction should be avoided. All responses should emphasize the positive. A negative response, especially one that questions the knowledge of professionalism of the author must not be allowed.

7. **Implement a Quarterly Lessons Learned Newsletter**

Lessons learned at the lower organizational levels do not make it into the MCLLS databases. Some lesson learned are filtered during the screening process when commanders and their staffs decide what is relevant for Marine Corps wide dissemination. Many more lessons learned are never documented. An obstacle to organizational learning is the lack of awareness, at the lower organizational levels, of MCLLS' purpose and capabilities. Most Marines work in the organizational levels that have the least access to

MCLLS. These Marines also tend to be the least experienced, and have the most to learn.

A common suggestion to improve MCLLS is to better advertise the system. I recommend that MCCDC implement a quarterly newsletter containing MCLLS related issues. I would publicize which units submit the most MCLLS reports, adding a little friendly competition into the program. I would include a section identifying benefits that Marines have gained from using the system. Public recognition in the quarterly newsletter could become an incentive to use MCLLS while promoting system awareness.

The Marine Corps could use the U.S. Army's Center for Army Lessons Learned publications as models. The Marine Corps should incorporate relevant Army lessons learned into the Marine Corps program. The quarterly newsletter would also provide another communications medium to get lessons learned into the hands of individuals that do not have access to a computer system.

8. **Storing Computer Files**

My observations indicate that Marines experience difficulty storing computer files for future access. Filenames frequently give little indication of the file's contents. No standard method of storing computer data has been developed. Consequently, computer files, especially those on floppy disks, are often stored in disarray. One solution would be to implement procedures similar to DoD's standard subject identification code system (SSIC) that is used to organize paper records. Computer users could create folders by standard subject codes and manage the files in a similar manner to paper document file management.

There are numerous different ways to organize the data files. Each organization must develop its own methods of storing data in an organized manner to encourage file retrieval. MCLLS users with local MCLLS databases must ensure that standard procedures exist to ensure personnel turnover does not result in misplaced data. I am convinced that many local lessons learned databases are lost because of disorganized file management. Marine Corps wide adoption of Windows should help alleviate this problem by allowing more specific, common language filenames.

9. Establish MCLLS Evaluation Standards

MCCDC should establish standards to measure the effectiveness of MCLLS. The criteria used in this thesis may provide a starting point. MCLLS program managers should periodically review the effectiveness and implement necessary changes. I recommend exploring MCLLS user's needs. An increased customer focus would make the system more beneficial. Give the Fleet Marines what they want and they will use the system.

D. A VISION FOR FUTURE ORGANIZATIONAL LEARNING

In a learning organization access to information enables all members to explore ways to improve the organization. Information can motivate people in several ways. Peters (1987) considers the widespread availability of information to be the only basis for effective day-to-day problem solving, which encourages continuous process improvement. Access to useful information stirs the competitive juices and speeds problem solving and action taking. Information makes it easier for all members to participate in promoting organizational objectives. Making the information available is

not enough. An organization must learn how to develop, record, analyze, and act upon the information. (Peters, p. 507)

MCLLS is a step in the right direction for the Marine Corps. It opens new methods of communication throughout the organization. It provides the opportunity to communicate across organizational boundaries. The weakness of MCLLS as a communication medium is that it is static and essentially one way. While Marines can submit lesson learned and receive feedback in the form of semiannual compact discs, there is little flexibility built into the system. Additionally, the time and effort it takes to submit a lesson learned through the chain of command limits the volume of information that could flow to MCCDC. I view today's MCLLS to be in the embryonic stage of promoting organizational learning. It is a reference document of Marine Corps' organizational memories.

I anticipate the MCLLS of tomorrow to build upon the fixed databases and include more opportunities for open communication laterally across organizational boundaries. Today, Marines holding similar jobs in the same type of units in different geographic regions rarely communicate. Three infantry company commanders aboard the major Marine Corps bases in Okinawa, Japan, Southern California, and North Carolina have almost identical jobs and face similar challenges in leading their companies. Their day-to-day routine is essentially the same and they have much they could learn from each other, yet they lack the means to communicate with each other. There is much they could learn from those who had held similar positions in the past and other current company commanders in different organizations. When you expand this example to include all Marines at all organizational levels, the learning potential is tremendous.

The Marine Corps should adopt methods of communication that would encourage the exchange of information across organizational boundaries. Commercially available on-line services such as America Online, Compuserve, Prodigy, and Genie, offer such a capability. Users connect to a central computer system via a modem. Multiple users through the country have access to the system at the same time. Users can exchange information among themselves or download data from centrally stored files.

The type of reports included in today's MCLLS could become the foundation of the "Marine Corps On-line" centrally stored files. Any Marine could access the database, search it, and download pertinent information. I would add other documents to the centrally stored files. I would store unit standard operating procedures, letters of instructions, operations orders, and other commonly written documents. Marines could pick and choose to meet their individual needs. Another file cabinet might contain all the class outlines and instruction material from military formal schools. Instead of the numerous Marines each day trying to gather resource material and create a worthwhile class on a given subject, the Marines could download the professionally prepared course material and teach with minimal preparation.

"Marine Corps On-line" could contain meeting rooms for specific or general topics. There may be meeting rooms for operations officers, logisticians, non-commissioned officers, company commanders, lance corporals, and any number of categories. Users could "talk" via their computer keyboard with one another and get immediate reposes. Each meeting room provides an open forum for whatever the users want to discuss.

I envision a time in the future when a young Marine with a pay problem can find a senior Marine with disbursing experience on-line and quickly get

the type of help he needs to resolve the problem. In today's Marine Corps that would be considered violating the chain of command. I believe with such immediate access to information small problems could be resolved before they became major problems. There would be no need to violate the chain of command. The more effective the Marine Corps becomes at preventing little problems from becoming big problems, the more time Marines will have to train for their primary mission.

E. SUGGESTIONS FOR FUTURE STUDY

- Identify the types of information that Marine organizatio ed and can use to improve their capacity for organizational learning.
- Examine the effect of the rapid changes in information technologies on the traditional structured military chain of command. What will be the effects of information technology's ability to flatten the organizational structure?
- Study the use of desktop procedures and turnover folders to promote organizational learning.
- Evaluate the Remedial Action Program and its impact on organizational learning.
- Evaluate the Marine Corps' Combat Development Process.
- Evaluate whether double-loop learning is possible in a machine bureaucracy.
- Examine lateral communication among similar organizations in Marine Corps organizations.
- Examine the implementation of a new program. Develop a set of criteria to coordinate fielding the equipment, training, and any organizational changes that may be required.

Commander's Interview Questions

Name: *Location:*
Time interview began: *Date:*

[Thank you for taking the time to meet with me. I am examining the Marine Corps' Lessons Learned System and its impact on organizational learning. I am conducting this research for my master's thesis at the Naval Postgraduate School. My questions to you will address three primary topics relating to the Marine Corps Lessons Learned System: the submission process, retrieving lessons learned from the MCLLS databases and the system's effectiveness. I would also welcome any additional comments that you have about any aspect of the system. The information I collect will be strictly confidential. I will consolidate and summarize all interview data so that your name or unit will not be identified in any way. {PAUSE}

I would like to ensure that I accurately transcribe your responses, would you mind if I record your responses.]

1. In your opinion, what is the purpose of the Marine Corps Lessons Learned System.

2. Has anyone in your unit submitted a MCLLS report within the past year?

YES Why do you submit MCLLS reports?

It takes a good deal of time to formulate and submit a MCLLS report. Do you feel that submitting a MCLLS report is time well spent?
Why/Why not?

Do your MCLLS submissions differ significantly from the information contained in unit after action reports?
Yes How do they differ?

NO Why not?

3. Does your unit store command unique lessons learned or after action reports, that are not forwarded up the chain of command, in a computer database management system?

YES Why do you maintain separate records?
What software do you use?
NO Would you be interested in acquiring this capability?

4. If a Marine in your unit wanted to submit a lesson learned to HQMC, how would he do it?

5. Who in your organization decides what is a "lessons learned?"

6. How are lessons learned submissions reviewed in your chain of command?

7. From your perspective are there any obstacles that hinder the submission of lessons learned via the chain of command?

YES What obstacles exist?

8. The number of MCLLS submissions to HQMC has decreased significantly over the past twelve months. One suggestion to encourage more MCLLS submissions is to minimize the influence by those in the chain of command by allowing Marines to submit a lesson learned directly to Quantico. What do you think about this proposal?

9. Have you or anyone from your unit submitted a MCLLS report and had that report modified or rejected at a higher level in your chain of command?

Yes When did this occur?
Do you know why?

10. Have you ever modified or rejected a MCLLS report?

Yes Why?

11. I have reviewed numerous lessons learned from the MCLLS database. One trend that stands out is that very few of the submissions indicate that their unit made a mistake, rather they seem to point the finger at an external cause. Do your experiences with MCLLS concur with my observations?

Yes Why do you think this occurs?

12. Has anyone in your chain of command encouraged you to submit MCLLS reports?

YES What type of encouragement did you receive?

13. Does your organization encourage Marines to submit lessons learned?

Yes How do you do that?

14. During my research, numerous Marines have discussed the importance of "saving face," by accentuating the positive benefits and overlooking the negative aspects of a given lesson learned, when submitting MCLLS reports? In your opinion does "saving face" play a role in the lessons learned process?

Yes How does that effect MCLLS submissions?

15. Would you submit or forward a lesson learned that reflected poorly on your organization?

Yes Would that expose you to criticism from your seniors?

No Why not?

[Please answer the following questions with a number between 1 and 5. For each question, 1 is at the low end of the scale and 5 is at the high end of the scale.]

16. On a scale of 1 to 5, where 1 is low, 3 is moderate and 5 is high, rate your level of computer literacy?

1 2 3 4 5

17. On the same scale, rate the level of computer literacy of the Marines working in your command?

1 2 3 4 5

18. On a scale of 1 to 5, where 1 is inexperienced, 3 is moderately experienced, and 5 is very experienced, rate your level of experience with submitting MCLLS reports?

1 2 3 4 5

19. On the same scale, rate your level of experience with retrieving lessons learned from the MCLLS databases?

1 2 3 4 5

[The following questions address retrieving lessons learned from the MCLLS database.]

20. Do you or anyone in your unit use the MCLLS database to search for lessons learned?

YES What type of information do you try to find?

Are the searches generally helpful?
YES How?

NO Why not?

NO Why not?

21. If a Marine in your unit wanted to search a MCLLS database for lessons learned, how would he do it?

22. Do Marines who do not work in the S-3 shop have access the MCLLS databases?

YES How do you accomplish that?

NO Why is access limited to those who work in one office?

23. In you opinion, would more access to the MCLLS software improve learning in your organization?

Yes How

No Why not?

24. Has anyone in your unit received any MCLLS training?

YES Was the training beneficial?

How?

25. Have lessons learned retrieved from the MCLLS databases helped you to better perform your job?

YES Can you give me a specific example?

NO Has your unit benefited from using the MCLLS databases in any way?

[The following questions address your opinion of the overall effectiveness of the Marine Corps Lessons Learned System. Once again, please answer the following questions with a number between 1 and 5. For each question, 1 is at the low end of the scale and 5 is at the high end of the scale.]

26. On a scale of 1 to 5, how do you rate MCLLS impact on your unit;1 is least beneficial, 3 is moderately beneficial, and 5 being most beneficial?

1 2 3 4 5

27. On a scale of 1 to 5, , how do you rate the cost effectiveness of MCLLS ***in terms of your time invested to submit lessons learned***, 1 is a waste of money, 3 is neutral and 5 is worth ever penny?

1 2 3 4 5

28. On the same scale, how do you rate the cost effectiveness of MCLLS ***in terms of your time invested to find and apply lessons learned*** from the Marine Corps Lesson Learned databases?

1 2 3 4 5

29. Based on my research interviews, I sensed a level of frustration among those who have submitted MCLLS reports but have not benefited from the MCLLS databases. Do you see this as a problem?

Yes What can be done about it?

30. Has submitting MCLLS reports or using the database impacted your methods of conducting business?

YES Can you give me some examples?

31. How would you evaluate MCLLS impact on promoting learning throughout the Marine Corps?

a) positive impact
b)
c) no effect
d)
e) negative impact

32. If you had to purchase MCLLS software with your unit's funds, would you buy it?

How much would you be willing to pay?

33. Do you have any suggestions to improve the system?

YES

[Thank you for taking the time to answer all my questions.
Do you have any questions or comments about this interview? Time interview ended:]

MCLLS Manager's Interview Questions

Name: *Location:*
Time interview began: *Date:*

[Thank you for taking the time to meet with me. I am examining the Marine Corps' Lessons Learned System and its impact on organizational learning. I am conducting this research for my master's thesis at the Naval Postgraduate School. My questions to you will address three primary topics relating to the Marine Corps Lessons Learned System: the submission process, retrieving lessons learned from the MCLLS databases and the system's effectiveness. I would also welcome any additional comments that you have about any aspect of the system. The information I collect will be strictly confidential. I will consolidate and summarize all interview data so that your name or unit will not be identified in any way. {PAUSE}

I would like to ensure that I accurately transcribe your responses, would you mind if I record your responses.]

1. Does your unit have a CD-ROM machine attached to a computer?

   YES Where is it located?
   NO

2. Does your unit have the MCLLS software?

   YES Where is it located? S-3 office, other locations

   Do you know the version that your unit uses?
   YES Version **1.3 or 4.0?**
   NO Do you know if your version less than one year old?

   NO Why not?

3. Have you or anyone in your unit submitted a MCLLS report within the past year?

   YES What type of circumstances would cause you to submit a MCLLS report?

   Why do you submit MCLLS reports?

   Do you feel that submitting a MCLLS report is a productive task?

Do you or your unit you use the MCLLS Instructional Input Program (MIIPS) to submit MCLLS reports?

Has MIIPS made a difference in your ability to submit MCLLS reports?

How?

NO Why not?

4. Has anyone in your chain of command encouraged you to submit MCLLS reports?

YES What type of encouragement did you receive?

5. Have you or anyone from your unit submitted a MCLLS report and had that report modified or rejected at a higher level in your chain of command?

When did this occur?

Do you know why?

6. If a Marine in your unit wanted to submit a lesson learned to HQMC, how would he do it?

7. Do you have a designated individual conduct all MCLLS submission related tasks?

YES Who?

8 Have you or anyone in your unit experienced and difficulties submitting the MCLLS report in the proper format?

YES What type of problems?

[Please answer the following questions with a number between 1 and 5. For each question, 1 is at the low end of the scale , 3 is inoderate and 5 is at the high end of the scale.]

9. On a scale of 1 to 5, with 1 being low, 3 being moderate and 5 being high, rate your level of computer literacy?

1 2 3 4 5

10. On the same scale, 1 being low, 3 being moderate and 5 being high, rate the level of computer literacy of the Marines working in your office?

1 2 3 4 5

11. On a scale of 1 to 5, with 1 being inexperienced, 3 being moderately experienced and 5 being very experienced, rate your level of experience with submitting MCLLS reports?

1 2 3 4 5

12. On the same scale, with 1 being inexperienced, 3 being moderately experienced and 5 being very experienced, rate your level of experience with retrieving lessons learned from the MCLLS databases?

1 2 3 4 5

[The next section of questions address retrieving lessons learned from the MCLLS databases]

13. Do many members of your unit know how to access the MCLLS lessons learned database to retrieve information?

YES Approximately how many?

What are their positions in the organization?

NO Why not?

14. Do you or anyone in your unit use the MCLLS database to search for lessons learned?

YES What type of searches are conducted?

Are the searches generally helpful?
YES How?

NO Why not?

How often do Marines in your unit conduct lessons learned searches of the MCLLS database?

Why not more frequently?

NO Why not?

15. If a Marine in your unit wanted to search a MCLLS database for lessons learned, how would he do it?

16. Do Marines who do not work in the S3/G3 have access the MCLLS databases?

YES Are their any limitations?

NO Why not?

17. To the best of your knowledge has anyone in your unit experienced any difficulty operating the MCLLS software to retrieve a lesson learned?

YES What type of problems?

18. Has anyone in your unit received any MCLLS training?

YES Was the training beneficial?

How?

19. Does your unit store command unique lessons learned or after action reports in a computer database management system?

YES What software do you use?

NO Would you be interested in acquiring this capability?

Why/Why not?

20. Have lessons learned from the MCLLS databases helped you to better perform your job?

YES How?

NO Have you benefited from using the MCLLS databases in any way?

[The following questions address yourm opinion of the overall effectiveness of the Marine Corps Lessons Learned System. Once again, please answer the following questions with a number between 1 and 5. For each question, 1 is at the low end of the scale , 3 is in the middle, and 5 is at the high end of the scale.]

21. On a scale of 1 to 5, with 1 being the least user friendly, 3 being moderately user friendly, and 5 being the most user friendly, how would you describe MCLLS in terms of ease of operation?

1 2 3 4 5

22. On a scale of 1 to 5, with 1 being least beneficial, 3 being moderately beneficial and 5 being most beneficial, how do you rate MCLLS impact on your unit.

1 2 3 4 5

23. On a scale of 1 to 5, with 1 being a waste of money, 3 being neutral, and 5 being worth ever penny, how do you rate the cost effectiveness of MCLLS in terms of your time invested to submit lessons learned?

1 2 3 4 5

24. On a scale of 1 to 5, with 1 being a waste of money, 3 being neutral, and 5 being worth ever penny, how do you rate the cost effectiveness of MCLLS in terms of your time invested to find and apply lessons learned from the Marine Corps Lesson Learned databases?

1 2 3 4 5

25 In using the Marine Corps Lessons Learned System, have you changed your methods of conducting business in any way?

YES

26. Do you have any suggestions to improve the system?

NO
YES

[May I get the correct spelling of your name in case I need to contact you again.

Name: **Time interview ended:**

Thank you for taking the time to answer all my questions.
Do you have any questions or comments about this interview?]

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